

### PRELIMINARY DRAFT

State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials Material to Waters of the State

[Proposed for For Inclusion in the Water Quality Control Plans for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California]

### STATE WATER RESOURCES CONTROL BOARD

July 21, 2017

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#### Waters of the State

#### I. Introduction<sup>1</sup>

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The mission of the State Water Resources Control Board and the Regional Water Quality Control Boards (Water Boards) includes the preservation, enhancement, and restoration of the quality of California's water resources for the protection of the environment and all beneficial uses for the benefit of present and future generations. In accordance with the Porter-Cologne Water Quality Control Act (Water Code, § 13000 et seq.), the Water Boards are authorized to regulate discharges of waste, which includes discharges of dredged or fill material, that may affect the quality of waters of the state. As described below, waters of the state include some, but not all, features that are defined as wetlands, as well as other features, including the ocean, lakes, and rivers. These wetlands provide environmental and economic benefits to the people of this state, including flood and storm waterstormwater control, surface and ground water supply, fish and wildlife habitat, erosion control, pollution treatment, nutrient cycling, and public enjoyment. Wetlands ameliorate the effects of global climate change by providing floodwater storage, sequestering carbon, and maintaining vulnerable plant and animal communities. Many of these invaluable areas statewide have been lost to fill and development. Presently, wetlands are threatened by impacts from increasing population growth, land development, sea level rise, and climate change. These Procedures for the Discharges of Dredged or Fill Materials Material to Waters of the State (Procedures) conform to Executive Order W-59-93, commonly referred to as California's "no net loss" policy for wetlands. In accordance with Executive Order W-59-93, the Procedures ensure that the Water Boards' regulation of dredgeddredge or fill activities will be conducted in a manner "to ensure no overall net loss and long-term net gain in the quantity, quality, and permanence of wetlands acreage and values..." The Water Boards are committed to increasing the quantity, guality, and diversity of wetlands that qualify as waters of the state.

These Procedures contain a wetland definition in section II and wetland delineation procedures in section III, both of which apply to all Water Board programs. The wetland definition encompasses the full range of wetland types commonly recognized in California, including some features not protected under federal law, and reflects current scientific understanding of the formation and functioning of wetlands. These Procedures also include procedures for the <a href="submission">submission</a>, review and approval of <a href="applications for">applications for</a> activities that could result in the discharge of dredged or fill material to any waters of the state in section IV. The Procedures include elements of the Clean Water Act Section 404(b)(1) Guidelines, thereby bringing uniformity to Water Boards' regulation of discharges of dredged or fill material to all waters of the state. The effective date of these Procedures shall be [insert date that is nine months after approval by the Office of Administrative Law].

#### II. Wetland Definition

34 The Water Boards define an area as wetland as follows:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of

<sup>1 [</sup>NOTE: These Procedures will be incorporated into the Water Quality Control Plans for (1) Inland Surface Waters Enclosed Bays and Estuaries and (2) Ocean Waters of California. Because the Procedures will already have been adopted, future incorporation of the Procedures, as adopted, into the water quality control plans will be considered non-substantive amendments. At that time, formatting and other organizational edits necessary for incorporation into the water quality control plans will be addressed.]

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- such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.
  - The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the state" includes all "waters of the U.S." The following wetlands are waters of the state:
    - Natural wetlands,
    - 2. Wetlands created by modification of a <u>surface</u> water of the state, <sup>43</sup>
    - 3. Wetlands that meet current or historic definitions of "waters of the United States," 2 and
    - 3. 4. Artificial wetlands that meet any of the following criteria:
      - Approved by an agency as <u>compensatory</u> mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
      - b. Specifically identified in a water quality control plan as a wetland or other water of the state;
      - c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
      - d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy another one of the above criteria set forth in 2, 3a, or 3b):

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<sup>&</sup>lt;sup>2</sup> Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code or Regulations title 23, section 3831(w).) This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in an aquatic resource report verified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S." under the federal Clean Water Act.

<sup>&</sup>lt;sup>43</sup> "Created by modification of a <u>surface</u> water of the state" means that the wetland that is being evaluated <u>must have been directly converted from</u> was created by modifying an area that was a <u>surface</u> water of the state, and at the time of such modification. It does not include a <u>situation</u> wetland that is created in a location where <u>thea</u> water of the state <u>Washad existed historically, but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.</u>

<sup>&</sup>lt;sup>2</sup> This includes features that have been determined by the U.S. Environmental Protection Agency or the U.S. Army Corps of Engineers to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in a preliminary jurisdictional determination upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S."

<sup>&</sup>lt;sup>34</sup> Artificial wetlands are wetlands that result from human activity.

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56	i.	Industrial or municipal wastewater treatment or disposal,
57	ii.	Settling of sediment,
58 59 60	iii.	Storm water detention Detention, retention, infiltration, or treatment, of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program.
61	<u>iv.</u>	<u>Treatment of surface waters</u> ,
62	<u>V.</u>	iv. Agricultural crop irrigation or stock watering,
63	<u>vi.</u>	vFire suppression,
64	<del>vi.</del>	Cooling water,
65	<u>vii.</u>	Industrial processing or cooling.
66 67	<u>viii.</u>	vii. Active surface mining – even if the site is managed for interim wetlands functions and values, or
68	<u>ix.</u>	viiiLog storage <sub>±</sub>
69	<u>X.</u>	Treatment, storage, or distribution of recycled water, or
70 71	<u>xi.</u>	Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
72	<u>xii.</u>	Fields flooded for rice growing. <sup>5</sup>

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a. 3.b. or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

#### III. Wetland Delineation

The permitting authority shall rely on any wetland area delineation from a final aquatic resource report, with a preliminary or approved jurisdictional determination issued verified by the United States U.S. Army Corps of Engineers (Corps) for the purposes of determining the extent of wetland waters of the U.S. A delineation of non-federalany wetland areas potentially impacted by the project that are not delineated in a final aquatic resource report verified by the Corps shall be performed using the methods described in the three federal documents listed below (collectively referred to as "1987 Manual and Supplements") to determine whether the area meets the state definition of a wetland as defined above. As described in the 1987 Manual and Supplements, an area "lacks vegetation" if it has less than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be modified only to allow for the fact that the lack of vegetation does not preclude the determination of such an area

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<sup>&</sup>lt;sup>5</sup> Fields used for the cultivation of rice (including wild rice) that have not been abandoned due to five consecutive years of non-use for the cultivation of rice (including wild rice) that are determined to be a water of the state in accordance with these Procedures shall not have beneficial use designations applied to them through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as otherwise required by federal law for fields that are considered to be waters of the United States. Further, agricultural inputs legally applied to fields used for the cultivation of rice (including wild rice) shall not constitute a discharge of waste to a water of the state. Agricultural inputs that migrate to a surface water or groundwater may be considered a discharge of waste and are subject to waste discharge requirements or waivers of such requirements pursuant to the Water Board's authority to issue or waive waste discharge requirements or take other actions as applicable.

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that meets the definition of wetland. Terms as defined in these Procedures shall be used if there is 87 88 conflict with terms in the 1987 Manual and Supplements.

- Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

#### IV. Procedures for Regulation of Discharges of Dredged or Fill Material to Waters of the State

The purpose of this section is to establish application procedures for discharges of dredged or fill material to waters of the state, which includes both waters of the U.S. and non-federal waters of the state. This section supplements existing state requirements for discharges of dredged or fill material to waters of the U.S.<sup>46</sup> These Procedures include Appendix A, which contains relevant portions of the U.S. EPA's Section 404(b)(1) "Guidelines for Specification of Disposal Sites for Dredge or Fill Material"<sup>5/2</sup> (Guidelines), 1980, with minor modifications to make them applicable to the state dredged or fill program (hereafter State Supplemental Dredge or Fill Guidelines). 68 This section applies to all applications for discharges of dredged or fill material to waters of the state submitted after [insert the effective date of the Plan Amendment that is nine months after approval by the Office of Administrative Law 9 The Procedures do not apply to applications that are submitted prior to [insert date that is nine months after approval by the Office of Administrative Lawl.

<sup>57</sup> 40 C.F.R. § 230.

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<sup>46</sup> California Code of Regulations, title 23, sections 3830-3869 (state's Clean Water Act (CWA) section 401 (33 USC § 1341) water quality certification program)

<sup>68</sup> The State Supplemental Dredge andor Fill Guidelines are included as Appendix A. Because Appendix A is the State Supplemental Dredge or Fill Guidelines are derived directly from the U.S. EPA's 404(b)(1) guidelines Guidelines, it uses slightly different terms than terms used in sections I through V of these Procedures. Appendix AThe State Supplemental Dredge or Fill Guidelines will be applied in a manner consistent with sections I through V of these Procedures.

<sup>&</sup>lt;sup>9</sup> In cases where the applicant is a state agency and is acting as the CEQA lead agency for one or more projects otherwise subject to this section, and that state agency is a party to an existing written agreement (e.g., memorandum of understanding) with the State Water Board that sets out alternative procedures and requirements regarding the submission, review, or approval of project applications, the permitting authority shall apply the terms and conditions of the agreement in lieu of the terms and conditions of this section. After adoption of these Procedures, the State Water Board may also enter into such written agreements after consideration at a public meeting; such an agreement may include, for example, early consultation regarding potential project applications, early identification and analysis of project alternatives and mitigation measures, and dispute resolution. Any written agreements, whether existing or entered into after the adoption of these Procedures. may be amended in writing at any time by joint agreement of the parties, and such amended agreements shall govern in lieu of the terms and

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#### **Project Application Submittal for Individual Orders**

- 114 Unless excluded by Sectionsection IV.D, applicants must file an application towith the Water Boards for
- any activity that could result in the discharge of dredged or fill material to waters of the state in
- accordance with California Code of Regulations, title 23, section 3855. This application requirement
- 117 applies to new discharges, proposed material changes in the character, location, or volume of existing
- discharges, and upon renewal of existing Orders for existing discharges. The permitting authority may
- 119 <u>amend an existing Order solely for the purpose of extending the expiration date without requiring a new</u>
- 120 <u>application</u>.

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- 121 The applicant may consult with the Water Boards to determine whether a project could result in
- 122 impacts a discharge of dredged or fill material to waters of the state and/or discuss submittals that would
- meet the application requirements listed below. <u>Discharges of dredged or fill material or other waste</u>
- material to areas that are not waters of the state, but that could affect the quality of waters of the state.
- may be addressed under other Water Board regulatory programs.

#### A. Project Application Submittal for Individual Orders

- The requirements set forth in sections IV.A and IV.B apply only to individual orders. Applicants must submit the items listed in subsection 1 to the permitting authority. In addition, applicants shall consult with the permitting authority about the items listed in subsection 2. Within 30 days of receiving the items listed in subsection 1, the permitting authority may require the applicant to submit one or more of the items in subsection 2 for a complete application. Applicants are encouraged to consult with the
- the items in subsection 2 for a complete application. <u>Applicants are encouraged to consult with the permitting authority to determine the appropriate level of detail for the items in subsections 1 (and 2, if</u>
- 133 applicable). Within 30 days of receiving all of the required items, the permitting authority shall determine
- whether the application is complete and notify the applicant accordingly. If the applicant's federal
- license or permit application includes any of the information required in subsections 1 or 2 below, the
- applicant may submit the federal application materials to satisfy the corresponding state application
- information. If federal application materials are submitted as part of the state application, the applicant
- shall indicate where the corresponding state application information can be found in the federal
- 139 application materials.
- 140 1. Items Required for a Complete Application
  - a. All items listed in California Code of Regulations, title 23, section 3856 "Contents of a Complete Application."811
  - b. If waters of the U.S. are present, a final Corps requires an aquatic resource delineation report, with a preliminary or approved jurisdictional determination issued copy of the report verified by the Corps.

conditions of this section. All other applicable laws, including requirements for public notice and comment, apply to the permitting authorities' approval of projects under such an agreement.

<sup>710</sup> Note that California Code of Regulations, title 23, section 3855 applies only to individual water quality certifications, but these Procedures extend the application of section 3855 to individual waste discharge requirements for discharges of dredged or fill material to waters of the state and waivers thereof.

<sup>811</sup> Note that California Code of Regulations, title 23, section 3856 applies only to individual water quality certifications, but these Procedures extend the application of section 3856 to individual waste discharge requirements for discharges of dredged or fill material to waters of the state and waivers thereof.

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- c. If A delineation of any waters of the state outside of federal jurisdiction are present, athat are not delineated in an aquatic resource delineation of those report verified by the Corps. If such waters, including include wetlands, the wetlands must be delineated as described in section III.
- d. The dates upon which the overall project activity will begin and end; and, if known, the date(s) upon which the discharge(s) will take place.
- e. Map(s) with a scale of at least 1:24000 (1" = 2000') and of sufficient detail to accurately show (1) the boundaries of the lands owned or to be utilized by the applicant in carrying out the proposed activity, including the grading limits, proposed land uses, and the location, dimensions and type of any structures erected (if known) or to be erected and (2) all aquatic resources that may qualify as waters of the state, within the boundaries of the project, and all aquatic resources that may qualify as waters of the state outside of the boundary of the project that could be affected impacted by the project. A map submitted for a Corps' preliminary jurisdictional determination verified by the Corps may satisfy this requirement if it includes all potential waters of the state. The permitting authority may require that the map(s) be submitted in electronic format (e.g., GIS shapefiles).
- f. A description of the waters proposed to receive a discharge of dredged be impacted by the dredge or fill material, including activity. The description should include the beneficial uses as listed in the applicable water quality control plan. The description should also include: a description of discharge the activity at each individual impact discharge or dredge location; quantity of impact impacts to waters proposed to receive a discharge of dredged or fill material at each location rounded to at least the nearest one-thousandth hundredth (0.0010.01) of an acre, nearest linear foot, and quantity of impacts to waters proposed to be dredged at each dredging location to the nearest cubic yard (as applicable); assessment of potential direct and indirect impacts to listed beneficial uses resulting from the discharge or dredging activity and potential mitigation measures for those potential impacts to beneficial uses, identification of existing water quality impairment(s); the source of water quality impairment(s), if known; and the presence of rare, threatened or endangered species habitat.
- g. An alternatives analysis, <sup>913</sup> unless any of the following exemptions apply. <u>The exemption from the alternatives analysis requirement does not preclude a permitting authority from requiring the applicant to demonstrate in its application that the project complies with section IV.B.1.a.</u>
  - i. The project includes discharges to waters of the state outside of federal jurisdiction, but the <a href="mailto:entire">entire</a> project would meet the terms and conditions of one or more Water Board <a href="mailto:entire">ecertified</a> Corps' General Permits, <a href="mailto:including any Corps District's regional terms and conditions">including any Corps District's regional terms and conditions</a>, if all discharges were to waters of the U.S. The permitting authority will verify that the <a href="mailto:entire">entire</a>

<sup>12 &</sup>quot;Rare, threatened, or endangered species" as used in the Procedures refers to plant and animal species listed as rare, threatened, or endangered pursuant to the California Endangered Species Act of 1984 (Fish & Game Code, § 2050 et seq.), the Native Plant Protection Act of 1977 (Fish & Game Code, § 1900 et seq.), or the Federal Endangered Species Act of 1973 (16 U.S.C. § 1531 et seq.).

<sup>913 &</sup>quot;Alternatives analysis" as used in these Procedures refer to the analysis required by Section IV.A.(1.h) and Appendix A, State Supplement Dredged is a means to comply with the State Supplemental Dredge or Fill Guidelines, section 230.10(a). An alternatives analysis also may be required in order to comply with other statutory or regulatory requirements, such as CEQA or a Regional Board water quality control plan discharge prohibition. The exemptions and the tiers set forth below do not affect any alternatives analysis conducted pursuant to another statutory or regulatory requirement. To the extent that the permitting authority is acting as the lead agency under CEQA, it may be necessary for the permitting authority to conduct further analysis to comply with CEQA.

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180		project would meet the terms and conditions of the Corps' General Permit(s) if all	
181		discharges, including discharges to waters of the state outside of federal jurisdiction, were	
182		to waters of the U.S. based on information supplied by the applicant.	
183	ii.	The project includes only discharges to waters of the U.S. and meets the terms and	

- ii. The project includes only discharges to waters of the U.S. and meets the terms and conditions for coverage under an uncertified Corps' General Permit, including any Corps District's regional terms and conditions. This exemption does not apply if the discharge of dredged or fill material will directly impact:
  - a) more than two-tenths (0.2) of an acre or 300 linear feet of waters of the state;
  - b) rare, threatened, or endangered species habitat in waters of the state:
  - c) wetlands or eel grass beds; or
  - <u>d)</u> <u>Outstanding National Resource Waters or Areas of Special Biological Significance.</u>
- <u>The project</u> would be conducted in accordance with a watershed plan that has been approved <u>for use</u> by the permitting authority and analyzed in an environmental document that includes a sufficient alternatives analysis, monitoring provisions, and guidance on compensatory mitigation opportunities.
- iv. iii. The project is an Ecological Restoration and Enhancement Project.
- <u>v.</u> The project has no permanent impacts to aquatic resources and no impacts to any bog, fen, playa, seep wetland, vernal pool, headwater creek, eelgrass bed, anadromous fish habitat, or habitat for rare, threatened or endangered species habitat in waters of the state, wetlands or eel grass beds, Outstanding National Resource Waters or Areas of Special Biological Significance, and all implementation actions in the restoration plan can reasonably be concluded within one year.
- h. If none of the above exemptions apply, the applicant must submit an alternatives analysis consistent with the requirements of <a href="section-230.10">section-230.10</a> of the State Supplemental Dredge or Fill Guidelines that allows the permitting authority to determine whether the proposed project is the Least Environmentally Damaging Practicable Alternative (LEDPA). If the applicant submitted a <a href="draftinformation">draftinformation</a> to the Corps to support an alternatives analysis to the Corps, the applicant shall provide a <a href="copythat information">copythat information</a> to the permitting authority. Such alternatives analyses information may satisfy some or all of the following requirements in accordance with <a href="Section-Section">Section IV.B.3</a>. Alternatives analyses shall be completed in accordance with the following tiers, unless the permitting authority determines that a lesser. The level of analysis is appropriate. The level of effort required for an alternatives analysis within each tierof the three tiers shall be commensurate with the significance of the project's potential threats to water.

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#### quality and beneficial uses 10 impacts resulting from the discharge. 14

- i. Tier 3 projects include any project discharge of dredged or fill material that directly impacts more than two-tenths (0.2) of an acre or 300 linear feet of waters of the state, or directly impacts a bog, fen, playa, seep wetland, vernal pool, headwater creek, eelgrass bed, anadromous fish habitat, or habitat for rare, threatened or endangered species; habitat in waters of the state, wetlands or eel grass beds, or Outstanding National Resource Waters or Areas of Special Biological Significance, and is not a project that inherently cannot be located at an alternate location. Tier 3 projects shall provide an analysis of off-site and onsite alternatives.
- ii. Tier 2 projects include any project discharge of dredged or fill material that directly impacts more than one tenth (0.1) and less than or equal to two tenths (0.2) of an acre or more than 100 and less than or equal to 300 linear feet of waters of the state unless it meets the criteria for a Tier 3 project, or any project that inherently cannot be located at an alternate location (unless it meets the size requirements set forth in Tier 1). Tier 2 projects shall provide an analysis of only on-site alternatives. For routine operation and maintenance of existing facilities, analysis of on-site alternatives is limited to operation and maintenance alternatives for the facility.
- iii. Tier 1 projects include any project discharge of dredged or fill material that directly impacts less than or equal to one tenth (0.1) of an acre or less than or equal to 100 linear feet of waters of the state, unless it ismeets the criteria for a Tier 3 project because it impacts a specified habitat type. Tier 1 projects shall provide a description of any steps that have been or will be taken to avoid and minimize loss of, or significant adverse impacts to, beneficial uses of waters of the state.
- 2. Additional Information Required for a Complete Application
  - a. If required by the permitting authority on a case-by-case basis, if the wetland area delineations were conducted in the dry season, supplemental field data from the wet season to substantiate dry season delineations, as is consistent with the 1987 Manual and Supplements.
  - b. If required by the permitting authority on a case-by-case basis, an assessment of the potential impacts associated with climate change related to the proposed project and any proposed compensatory mitigation, and any measures to avoid or minimize those potential impacts.
  - e. If compensatory mitigation is required by the permitting authority, on a case-by-case basis, an assessment of the overall condition of aquatic resources proposed to receive a discharge of dredged or fill material and their likely stressors, using an assessment method approved by the permitting authority and a draft compensatory mitigation plan developed using a watershed approach containing the items <u>listed</u> below. Compensatory mitigation plans are not required for Ecological Restoration and Enhancement Projects. For permittees who intend to fulfill their

<sup>&</sup>lt;sup>40</sup> As used below, "impacts" include both permanent and temporary impacts.

<sup>&</sup>lt;sup>14</sup> As used below, "impacts" include both permanent and temporary impacts.

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compensatory mitigation obligations by securing credits from approved mitigation banks or inlieu fee programs, their mitigation plans need include only-the items i. ii., and iiii, as described below, as well as information required in Appendix Athe State Supplemental Dredge or Fill Guidelines, section 230.94 (c)(5) and (c)(6), and the name of the specific mitigation bank or inlieu fee program proposed to be used.

Draft compensatory mitigation plans shall comport with the State Supplemental Dredge or Fill Guidelines, Subpart J, and include the elementsitems listed below.

- i. A watershed profile for the project evaluation area for both the proposed dredged or fill project and the proposed compensatory mitigation project.
- <u>ii.</u> An assessment of the overall condition of aquatic resources proposed to be impacted by the project and their likely stressors, using an assessment method approved by the permitting authority.
- iii. A description of how the project impacts and compensatory mitigation would not cause a net loss of the overall abundance, diversity, and condition of aquatic resources, based on the watershed profile. If the compensatory mitigation is located in the same watershed as the project, no net loss will be determined on a watershed basis. If the compensatory mitigation and project impacts are located in multiple watersheds, no net loss will be determined considering all affected watersheds collectively. The level of detail in the plan shall be sufficient to accurately evaluate whether compensatory mitigation offsets the adverse impacts attributed to a project.
- <u>iv.</u> Preliminary information about ecological performance standards, monitoring, and longterm protection and management, as described in <u>the</u> State Supplemental Dredge or Fill Guidelines.
- <u>v.</u> A timetable for implementing the compensatory mitigation plan.
- <u>vi.</u> v.-If the compensatory mitigation plan includes buffers, design criteria and monitoring requirements for those buffers.
- vii. If the compensatory mitigation involves restoration or establishment as the form of mitigation, applicants shall notify as applicable, state and federal land management agencies, airport land use commission, fire control districts, flood control districts, local mosquito-vector control district(s), and any other interested local entities prior to initial site selection. These entities should be notified as early as possible during the initial compensatory mitigation project design stage.
- viii. If required by the permitting authority, an assessment of reasonably foreseeable impacts to the compensatory mitigation associated with climate change, and any measures to avoid or minimize those potential impacts.
- d. If required by the permitting authority on a case-by-case basis, if project activities include inwater work or water diversions, a proposed water quality monitoring plan to monitor compliance with water quality objectives of the applicable water quality control plan. At a minimum, the plan should include type and frequency of sampling for each applicable parameter.
- d. e. In all cases where temporary impacts are proposed, a draft restoration plan that outlines

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design, implementation, assessment, and maintenance for restoring areas of temporary impact to pre-project conditions. The design components shall include the objectives of the restoration plan; grading plan of disturbed areas to pre-project contours; a planting palette with plant species native to the area; seed collection locations; and an invasive species management plan. The implementation component shall include all proposed actions to implement the plan (e.g., re-contouring, initial planting, site stabilization, removal of temporary structures) and a schedule for completing those actions. The maintenance and assessment components shall include a description of performance standards used to evaluate attainment of objectives; the timeframe for determining attainment of performance standards; and maintenance requirements (e.g., watering, weeding, replanting and invasive species control). If temporary impacts are proposed to be restored through passive restoration, the draft restoration plan shall include an explanation of how passive restoration will restore the area to pre-project conditions, assessment components, and an estimated date for expected restoration. The level of detail in the restoration plan shall be sufficient to accurately evaluate whether the restoration offsets addresses the adverse temporary impacts attributed to a project.

Prior to issuance of the Order, the The applicant shall submit a final restoration plan that describes the restoration of all temporarily disturbed areas to pre-project conditions—consistent with section IV.B.4.

For Ecological Restoration and Enhancement Projects, a restoration plan for temporary impacts provided as part of the binding stream or wetland enhancement or restoration agreement or wetland establishment agreement may satisfy this requirement.

E. For all Ecological Restoration and Enhancement Projects, a draft assessment plan including the following: project objectives; description of performance standards used to evaluate attainment of objectives; protocols for condition assessment; the timeframe and responsible party for performing condition assessment; and assessment schedule. A draft assessment plan shall provide for at least one assessment of the overall condition of aquatic resources and their likely stressors, using an appropriate assessment method approved by the permitting authority, prior to restoration and/or enhancement and two years following restoration and/or enhancement to determine success of the restoration and/or enhancement. An assessment plan approved by a federal or state resource agency, or a local agency with the primary function of managing land or water for wetland habitat purposes in accordance with a binding stream or wetland enhancement agreement, restoration agreement, or establishment agreement, will satisfy these requirements. An assessment plan approved by a non-governmental conservation organization or a state or federal agency that is statutorily tasked with natural resource management may satisfy some or all of these requirements.

#### B. Permitting Authority Review and Approval of Applications for Individual Orders

- The permitting authority will evaluate the potential impacts on the aquatic environment from the proposed project and determine whether the proposed project complies with these Procedures. The permitting authority has the discretion to approve a project only if the applicant has demonstrated the following:
  - a. A sequence of actions has been taken to first avoid, then to minimize, and lastly compensate for adverse impacts that cannot be practicably avoided or minimized to waters of the state;
  - b. The potential impacts will not contribute to a net loss of the overall abundance, diversity, and condition of aquatic resources in a watershed (or multiple watersheds when compensatory

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#### 334 mitigation is permitted in another watershed as set forth in section IV.B.5(d));

- The discharge of dredged or fill material will not violate water quality standards and will be consistent with all applicable water quality control plans and policies for water quality control; and
- d. The discharge of dredged or fill material will not cause or contribute to significant degradation of the waters of the state.
- The permitting authority shall rely on any final aquatic resource report, with a preliminary or approved jurisdictional determination issued verified by the Corps to determine boundaries of waters of the U.S. For all other wetland area delineations, the permitting authority shall review and approve delineations that are performed using the methods described in Section III.
- 3.4 Alternatives Analysis Review Requirements:

- a. The purpose of the alternatives analysis is to identify the LEDPA. The permitting authority will be responsible for determining the sufficiency of an alternatives analysis except as described in 3(b) below. In all cases, the alternatives analysis must establish that the proposed project alternative is the LEDPA in light of all potential direct, secondary (indirect), and cumulative impacts on the physical, chemical, and biological elements of the aquatic ecosystem.
- b. Discharges to waters of the U.S.

In reviewing and approving the alternatives analysis for discharges of dredged or fill material that impact waters of the U.S., the permitting authority shall defer to the Corps' determinations on the adequacy of the alternatives analysis, or rely on a draft alternatives analysis if no final determination has been made, unless the Executive Officer or Executive Director determines that (1) the permitting authority was not provided an adequate opportunity to collaborate in the development of the alternatives analysis, (2) the alternatives analysis does not adequately address aquatic resource issues identified in writing by the Executive Officer or Executive Director to the Corps during the development of the alternatives analysis, or (3) the proposed project and all of the identified alternatives would not comply with water quality standards.

If the project also includes discharges to waters of the state outside of federal jurisdiction, the permitting authority shall require the applicant to supplement the alternatives analysis to include waters of the state outside of federal jurisdiction unless the applicant has consulted with the permitting authority and the alternatives analysis addresses all issues identified by the permitting authority during the consultation process. If an alternatives analysis is not required by the Corps for waters of the U.S. impacted by the dischargedischarges of dredged or fill material to waters of the U.S., the permitting authority shall require an alternatives analysis for the entire project in accordance with the State Supplemental Dredge or Fill Guidelines, unless the project is exempt under Section IV.A.1-(q) above.

The permitting authority shall not apply the presumption set forth in the State Supplemental Dredge or Fill Guidelines, section 230.10(a)(3) to any non-vegetated waters of the U.S. that the Corps does not classify as a special aquatic site (as defined in subpart E of U.S. EPA's section 404(b)(1) Guidelines).

4. Prior to <u>or concurrent with issuance of the Order, the permitting authority will-review and approve the final restoration plan for temporary impacts. Generally, the permitting authority will approve the final restoration plan when it issues the Order. The permitting authority may approve the final</u>

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restoration plan after it issues the Order. In such cases the permitting authority shall include as a condition of the Order that the applicant receive approval of the final restoration plan prior to initiating the temporary impacts and shall specify a process for approving the final restoration plan.

#### 5. Compensatory Mitigation

- a. Compensatory mitigation, in accordance with the State Supplemental Dredge or Fill Guidelines, Subpart J, may be required to ensure that an activity complies with these Procedures. Consistent with section 230.93(a)(2) of the State Supplemental Guidelines, subject to the permitting authority's approval, compensatory mitigation may be performed using methods of restoration, enhancement, establishment, and in certain circumstances preservation. Restoration should generally be the first option considered because the likelihood of success is greater and the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation.
- b. Where feasible, the permitting authority will consult and coordinate with any other public agencies that have concurrent mitigation requirements in order to achieve multiple environmental benefits with a single mitigation project, thereby reducing the cost of compliance to the applicant.
- c. Amount: The amount of compensatory mitigation will be determined on a project-by-project basis in accordance with State Supplemental Dredge or Fill Guidelines, section 230.93(f). The permitting authority may take into account recent anthropogenic degradation to the aquatic resource and the potential and existing functions and conditions of the aquatic resource. A minimum of one-to-one acreage or length of stream reach replacement is necessary to compensate for wetland or stream losses unless an appropriate function or condition assessment method clearly demonstrates, on an exceptional basis, that a lesser amount is sufficient. A reduction in the mitigation ratio for The permitting authority may reduce the amount of compensatory mitigation will be considered by the permitting authority if buffer areas adjacent to the compensatory mitigation are also required to be maintained as part of the compensatory mitigation management plan. The amount of compensatory mitigation required by the permitting authority will vary depending on which of the following strategies the applicant uses to locate the mitigation site within a watershed.

Strategy 1: Applicant locates compensatory mitigation using a watershed approach based on a watershed profile developed from a watershed plan that: (1) has been approved <u>for use</u> by the permitting authority and analyzed in an environmental document, (2) includes monitoring provisions, and (3) includes guidance on compensatory mitigation opportunities;

<u>Strategy 2:</u> Applicant locates compensatory mitigation using a watershed approach based on a watershed profile developed for a project evaluation area, and demonstrates that the mitigation project will contribute to the sustainability of watershed functions and the overall health of the watershed area's aquatic resources.

Generally, the amount of compensatory mitigation required under Strategy 1 will be less than the amount of compensatory mitigation required under Strategy 2 since the level of certainty that a compensatory mitigation project will meet its performance standards increases if the compensatory mitigation project complies with a watershed plan as described above. Certainty increases when there is a corresponding increase in understanding of watershed conditions,

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which is increased when using a watershed plan as described above to determine compensatory mitigation requirements.

A minimum of one-to-one mitigation ratio, 15 measured as area or length, is required to compensate for wetland or stream losses when compensatory mitigation is required. Subject to the permitting authority's approval, the ratio may be satisfied using any of the methods identified in section IV.B.5(a). A higher overall mitigation ratio shall be used where necessary to ensure replacement of lost aquatic resource functions, as described in the State Supplemental Dredge or Fill Guidelines, section 230.93(f). Where temporary impacts will be restored to pre-project conditions, the permitting authority may require compensatory mitigation for temporal loss from the temporary impacts.

- d. <u>Type and Location</u>: The permitting authority will evaluate the applicant's proposed mitigation type and location based on the applicant's use of a watershed approach based on a watershed profile. The permitting authority will determine the appropriate type and location of compensatory mitigation based on watershed conditions, impact size, location and spacing, aquatic resource values, relevant watershed plans, and other considerations.
  - In general, the required compensatory mitigation should be located within the same watershed as the impact site, but the permitting authority may approve compensatory mitigation in a different watershed. For example, if a proposed project may affect more than one watershed, then the permitting authority may determine that locating all required project mitigation in one area is ecologically preferable to requiring mitigation within each watershed.
- e. <u>Final Compensatory Mitigation Plan:</u> The permitting authority will review and approve the final compensatory mitigation plan submitted by the applicant to ensure mitigation comports with the State Supplemental Dredge or Fill Guidelines, Water Code requirements, applicable water quality standards, and other appropriate requirements of state law. The level of detail in the final plan shall be sufficient to accurately evaluate whether compensatory mitigation offsets the adverse impacts attributed to a project considering the overall size and scope of impact. The compensatory mitigation plan shall be sufficient to provide the permitting authority with a reasonable assurance that replacement of the full range of lost aquatic resource(s) and/or functions will be provided in perpetuity.

The Generally, the permitting authority will approve the final compensatory mitigation plan when it issues the Order. Where compliant with CEQA, the permitting authority may approve the final compensatory mitigation plan after it issues the Order. In such cases the permitting authority shall include as a condition of anthe Order that the applicant receive approval of athe final mitigation plan prior to discharging dredged or fill materials material to waters of the state. In this case, the permitting authority will approve and shall specify a process for approving the final mitigation plan by amending the Order.

f. <u>Financial Security:</u> Where deemed necessary by the permitting authority, provision of a financial security (e.g., letter of credit or performance bond) shall be a condition of the Order. In this case, the permitting authority will approve the financial security to ensure compliance with compensatory mitigation plan requirements. <u>The financial security shall be in a form consistent</u>

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<sup>&</sup>lt;sup>15</sup> For temporary impacts, the minimum one-to-one mitigation ratio for wetland or stream losses is not applicable for temporal losses for impacts that are fully restored to pre-project conditions.

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#### with the California Constitution and state law.

- g. <u>Term of Mitigation Obligation:</u> The permitting authority may specify in the Order the conditions that must be met in order for the permitting authority to release the permittee from the mitigation obligation, including compensatory mitigation performance standards and long-term management funding obligations.
- 6. The permitting authority shall provide public notice in accordance with Water Code section 13167.5 for waste discharge requirements. The permitting authority shall provide public notice of an application for water quality certification in accordance with California Code of Regulations, title 23, section 3858. If the permitting authority receives comments on the application or there is substantial public interest in the project, the permitting authority shall also provide public notice of the draft Order, or draft amendment of the Order, unless circumstances warrant a shorter notice periodotherwise.
- 7. The permitting authority will review and approve the final monitoring and reporting requirements for all projects. Monitoring and reporting may be required to demonstrate compliance with the terms of the Order.

#### C. General Orders

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- Discharges of dredged or fill material to waters of the state that are regulated under a general order are not subject to the requirements set forth in sections IV.A and IV.B. Applicants applying to enroll under a general order shall follow the instructions specified in the general order for obtaining coverage.
- The permitting authority may issue general orders for specific classes of dredged or fill discharge activities that are similar; involve the same or similar types of discharges and possible adverse impacts requiring the same or similar conditions or limitations in order to alleviate potential adverse impacts to water quality; and are determined by the permitting authority to more appropriately be regulated under a general order rather than under an individual Order.
- General orders shall be reviewed, noticed, and issued in accordance with the applicable requirements of division 7 of the Water Code and the California Code of Regulations, division 3 of title 23.
- 485 Applicants applying to enroll under a general order shall follow the instructions specified in the general 486 order for obtaining coverage.

### D. Activities and Areas Excluded from the Application Procedures for Regulation of Discharges of Dredged or Fill Material to Waters of the State

- The application procedures specified in sections IV.A and IV.B do not apply to proposed discharges of dredged or fill material to waters of the state from the following activities or to the following areas. These exclusions do not, however, affect the Water Board's authority to issue or waive waste discharge requirements (WDRs) or take other actions for the following activities or areas to the extent authorized by the Water Code.
  - 1. Activities excluded from application procedures in sections IV.A and IV.B:

<sup>&</sup>lt;sup>16</sup> Note that not all activities identified in this section necessarily result in discharges of dredged or fill material to waters of the state.

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a. Activities that are exempt under CWA section 404(f) (33 USC § 1344(f)). The following federal regulations (Table 1), guidance letters (Table 2), and memoranda (Table 3), that have been adopted pursuant to CWA section 404(f) or that are used to interpret or implement section 404(f) shall be used when determining permitting authority shall use 33 CFR 323.4 (1986) and 40 CFR 232.3 (1988) to determine whether certain activities are excluded from these procedures exempt under CWA section 404(f). These documents regulations are hereby incorporated by reference and shall apply to all waters of the state. Consistent with CWA section 404(f)(2) and 40 CFR section 232.3, any discharge of dredged or fill material to a water of the state incidental to any of these activities is not exempt under CWA section 404(f) and shall be subject to the application procedures set forth in sections IV.A and IV.B, if (1) the purpose of the activity is bringing a water of the state into a use to which it was not previously subject, where the flow or circulation of water of the state may be impaired or the reach of such waters be reduced, or (2) the discharge contains any toxic pollutant listed in CWA section 307.

#### b. Table 1: CFR References<sup>11</sup>

Title	Section	Name
33 CFR	<del>323.</del> 4	Discharges not requiring permits (1986)
40 CFR	<del>232.3</del>	Activities not requiring permits (1988)

### Table 2: Applicable U.S. Army Corps of Engineers (Corps) Regulatory Guidance Letters (RGLs)<sup>12</sup>

RGL	Title
<del>82-03</del>	Irrigation Exemption in Section 404(F)(1)(C) of the Clean Water Act
84-01	Regulatory Jurisdiction Over Vegetative Operations
84-05	Fifth Circuit Decision in Avoyelles vs. Marsh
<del>85-04</del>	Agricultural Conversion
<del>86-01</del>	Exemptions to Clean Water Act - Plowing
<del>86-03</del>	Exemption of Farm and Forest Roads
<del>87-07</del>	Exemption for Drainage Ditch Maintenance
87-09	Exemption for Construction or Maintenance of Farm or Stock Ponds

<sup>17</sup> Unless otherwise specified, all federal statutes and regulations that are incorporated by reference into these Procedures are the versions of those federal statutes and regulations that are in effect as of [insert date of Board adoption].

<sup>&</sup>lt;sup>11</sup>-The documents in Table 1 are available at the U.S. Government Printing Office, Code of Federal Regulations webpage: <a href="http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=C.F.R.">http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=C.F.R.</a>

<sup>&</sup>lt;sup>12</sup>-The documents in Table 2 are available at the U.S. Army Corps of Engineers, Regulatory Program and Permits, Related Resources, Regulatory Guidance Letters webpage: <a href="http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.aspx">http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.aspx</a>

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92-02	Water Dependency and Cranberry Production
93-03	Rescission of RGL's 90-5 and 90-8
96-02	Applicability of Exemptions under Section 404(f) to "Deep Ripping" Activities in Wetlands
07-02	Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of Clean Water Act

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#### Table 3: Memoranda 13

Memorandum for the Field: Clean Water Act Section 404 Regulatory Program and Agricultural Activities (1990)

- **b. c.** Suction dredge mining activities for mineral recovery regulated under CWA section 402.
- c. Routine and emergency operation and maintenance activities conducted by public agencies, water utilities, or special districts that result in discharge of dredged or fill material to artificial, existing waters of the state currently used and maintained primarily for:
  - i. one or more of the purposes listed in section II.3.d. (ii), (iii), (iv), (x), or (xi); or
  - <u>ii.</u> <u>preserving the line, grade, volumetric or flow capacity within the existing footprint of a flood control or stormwater conveyance facility.</u>

This exclusion does not relieve public agencies, water utilities or special districts of their obligation to submit an application for a water quality certification consistent with California Code of Regulations, title 23, section 3856 or waste discharge requirements consistent with Water Code section 13260, whichever is applicable, to the permitting authority for these activities; or their responsibility to avoid and minimize adverse impacts to aquatic resources and beneficial uses from these activities. The permitting authority has full discretion to determine whether an activity described above qualifies for this exclusion based on the application submitted and other relevant information. If the permitting authority determines that an activity qualifies for this exclusion, the permitting authority retains full authority and discretion under the Porter-Cologne Water Quality Control Act to determine how to regulate the discharge of dredged or fill material. Where a permitting authority has already determined it appropriate to regulate these types of activities in specific instances, this exclusion in no way disturbs or limits the permitting authority's current regulation of these types of activities. This exclusion does not apply to the discharge of dredged or fill material to a water of the state approved by an agency as compensatory mitigation.

2. 2. Areas excluded from application procedures in sections IV.A and IV.B:

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<sup>&</sup>lt;sup>13</sup>-These documents are available at the U.S. Army Corps of Engineers Regulatory Program and Permits, Related Resources, Memoranda of Understanding/Agreement webpage: <a href="http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/MOUMOAs.aspx">http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/MOUMOAs.aspx</a>

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- a. Discharges of dredged or fill material that occur within wetland wetland areas that have been certified qualify as prior converted cropland (PCC) within the meaning of 33 CFR section 328.3(b)(2). The applicant may establish that the area is PCC by providing relevant documentary evidence that the area qualifies as PCC and has not been abandoned due to five consecutive years of non-agricultural purposes, or by providing a current PCC certification by the Natural Resources Conservation Service. The PCC exclusion will no longer apply if: (1) the PCC changes to a non-agricultural use, the Corps, or (2) the PCC is abandoned, meaning it is not planted to an agricultural commodity for more than five consecutive years and wetland characteristics return, and the land was not left idle in accordance with a USDA program U.S. EPA to the permitting authority.
  - For purposes of D.2.(a), agricultural commodity means any crop planted and produced by annual tilling of the soil, including tiling by one-trip planters, or sugarcane.<sup>14</sup>
  - ii. For purposes of D.2.(a), agricultural use means open land planted to an agricultural crop, used for the production of (1) food or fiber, (2) used for haying or grazing, (3) left idle per a USDA program, or (4) diverted from crop production to an approved cultural practice by NRCS that prevents erosion or other degradation.<sup>45</sup>
- b. Discharges of dredged or fill material that are associated with routine maintenance of storm water facilities regulated under another Water Board Order, such as sedimentation/storm water detention basins. Wetlands that are, or have been, in rice cultivation (including wild rice) within the last five years as of [insert the adoption date of these Procedures] and have not been abandoned due to five consecutive years of non-use in rice production.
- c. The following features used for agricultural purposes:
  - <u>i.</u> <u>Ditches with ephemeral flow that are not a relocated water of the state or excavated in a water of the state;</u>
  - <u>ii.</u> <u>Ditches with intermittent flow that are not a relocated water of the state or excavated in a water of the state, or that do not drain wetlands other than any wetlands described in sections (iv) or (v);</u>
  - <u>iii.</u> <u>Ditches that do not flow, either directly or through another water, into another water of</u> the state:
  - <u>iv.</u> Artificially irrigated areas that would revert to dry land should application of waters to that area cease; or
  - v. Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, and settling basins.
- The exclusions in section IV.D.2 do not apply to discharges of dredged or fill material that convert wetland areas to a non-agricultural use.

<sup>&</sup>lt;sup>44</sup>-Joint Guidance from the Natural Resources Conservation Service and the Army Corps of Engineers Concerning Wetland Determinations for the Clean Water Act and the Food Security Act of 1985, February 25, 2005.

<sup>&</sup>lt;sup>15</sup> Joint Guidance from the Natural Resources Conservation Service and the Army Corps of Engineers Concerning Wetland Determinations for the Clean Water Act and the Food Security Act of 1985, February 25, 2005

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- For requests for approvals from the Division of Water Rights for activities associated with (1) an appropriation of water subject to Part 2 (commencing with section 1200) of Division 2 of the Water Code, (2) a hydroelectric facility where the proposed activity requires a Federal Energy Regulatory Commission (FERC) license or amendment to a FERC license, or (3) any other diversion of water for beneficial use where approval by the Division of Water Rights is required, the Division of Water Rights
- will inform the applicant whether the application procedures in sections IV.A and IV.B will apply to the application.

#### V. Definitions

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- The following definitions apply to these Procedures, including the State Supplemental Dredge or Fill Guidelines. Unless otherwise indicated, any term that is not defined in these Procedures shall have the same meaning as defined in Water Code section 13050, and title 23, section 3831 of the California Code of Regulations.
- Abundance means an estimate of the amount of aquatic resources by type in a watershed area, and what types of aquatic resources are most and least prevalent.
- 587 Active Surface Mining means operations that, in accordance with Division 2, Chapter 9 of the Surface
  588 Mining and Reclamation Act of 1975, have an approved reclamation plan, and for which reclamation
  589 has not been certified as complete by the local lead agency with the concurrence of the Department of
  590 Conservation.
- Alternatives Analysis is the process of analyzing project alternatives, including the proposed project, to determine the alternative that is both practicable and the least environmentally damaging practicable alternative (LEDPA).
- 594 **Application** means a written request, including a report of waste discharge or request for water quality 595 certification, for authorization of any activity that may result in the discharge of dredged or fill material 596 and is subject to these Procedures.
- Wetland Delineation means the application of a technical and procedural method to identify the
   boundary of a wetland area within a specified study site by identifying the presence or absence of
   wetland indicators at multiple points at the site and by establishing boundaries that group together sets
   of points that share the same status as wetland versus non-wetland.

#### [Definition moved to the end.]

- 603 Discharge of Dredged Material means addition of dredged material, material that is excavated or 604 dredged from waters of the state, including redeposit of dredged material other than incidental fallback within, to the waters of state, or Fill Material shall have the same meanings as they are used in the 605 606 federal Clean Water Act and 40 CFR section 232.2, but (1) shall include discharges to waters of the 607 state that are not waters of the U.S. and (2) any demonstrations described in 40 CFR section 232.2(3)(i) shall be made to the permitting authority instead of the Corps or U.S. EPA. Placement of 608 dredged or fill material in a manner that could not affect the quality of waters of the state is not 609 considered a discharge of dredged or fill material. 610
- Diversity means the relative proportion of aquatic resource types, classification, connectivity, and spatial distribution in a watershed area.

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- Discharge of Fill Material means the addition of fill material where the material has the effect of replacing any portion of a water of the state with dry land or changing the bottom elevation of any portion of a water of the state.
  - **Ecological Restoration and Enhancement Project** means the project is voluntarily undertaken for the purpose of assisting or controlling the recovery of an aquatic ecosystem that has been degraded, damaged or destroyed to restore some measure of its natural condition and to enhance the beneficial uses, including potential beneficial uses of water.
  - Such projects are undertaken: 4)

- in accordance with the terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a wetland establishment agreement, between the <u>landownerreal</u> <u>property interest owner or the entity conducting the habitat restoration or enhancement work</u> and:
  - a. a federal or state resource agency, including, but not limited to, the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, Farm Service Agency, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Forest Service, U.S. Bureau of Land Management, California Department of Fish and Wildlife, California Wildlife Conservation Board, California Coastal Conservancy; or other federal or state resource agency or the Delta Conservancy:
  - <u>b.</u> <u>a local agency with the primary function of managing land or water for wetland habitat purposes; or </u>
  - c. a non-governmental conservation organization; or 2)
- 2) by a state or federal agency that is statutorily tasked with natural resource management.
- These projects do not include the conversion of a stream or natural wetland to uplands or stream channelization. It is recognized that <a href="ecological restoration and enhancement projects">ecological Restoration and Enhancement Projects</a> may require <a href="ecological maintenance">engoing maintenance or management to maximize fish, wildlife, habitat, or other ecological benefits, or filling gullied stream channels and similar rehabilitative activities to re-establish stream and meadow hydrology. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during rehabilitation activities are not considered a conversion to another aquatic habitat type. These projects also do not include actions required under a Water Board <a href="ecological benefits">ered. Ecological benefits</a>, or filling gullied stream channels and similar rehabilitative activities to re-establish stream and meadow hydrology. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during rehabilitation activities are not considered a conversion to another aquatic habitat type. These projects also do not include actions required under a Water Board <a href="ecological benefits">ered. Ecological benefits</a>, or water quality certification)</a>)
  Order for mitigation, actions to service required mitigation, or actions undertaken for the primary purpose of land development.
- Environmental Document means a document prepared for compliance with the California Environmental Quality Act (CEQA) or the National Environmental Policy Act (NEPA).
- **Hydrophyte** means any macrophyte that grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content; plants typically found in wet habitats.
- **LEDPA** means the least environmentally damaging practicable alternative. The determination of practicable alternatives shall be consistent with the State Supplemental <u>Dredge or Fill</u> Guidelines, section 230.10(a).

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- 652 Normal Circumstances is the soil and hydrologic conditions that are normally present, without regard 653 to whether the vegetation has been removed. The determination of whether normal circumstances 654 exist in a disturbed area involves an evaluation of the extent and relative permanence of the physical 655 alteration of wetlandswetland hydrology and hydrophytic vegetation, and consideration of the purpose 656 and cause of the physical alterations to hydrology and vegetation.
- 657 Order means Waste Discharge Requirements waste discharge requirements, waivers of Waste 658 <del>Discharge Requirements</del>waste discharge requirements, or water quality certification.
- 659 Permitting Authority means the entity or person issuing the Order (i.e., the applicable Water Board, Executive Director or Executive Officer, or his or her designee). 660
- 661 Project means the whole of an action that includes a discharge of dredged or fill material to waters of 662 the state.
- 663 Project Evaluation Area means an area that includes the project impact site, and/or the compensatory 664 mitigation site, and is sufficiently large to evaluate the effects of the project and/or the compensatory 665 mitigation on the abundance, diversity, and condition of aquatic resources in an ecologically meaningful 666 unit of the watershed. The size and location of the ecologically meaningful unit shall be based on a reasonable rationale. 667
- 668 Water Boards mean any of the nine Regional Water Quality Control Boards, the State Water 669 Resources Control Board, or all of them collectively.
- 670 Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary, 671 wetland, or ultimately the ocean.
- 672 Watershed Approach means an analytical process for evaluating the environmental effects of a 673 proposed project and making decisions that support the sustainability or improvement of aquatic 674 resources in a watershed. The watershed approach recognizes that the abundance, diversity, and 675 condition of aquatic resources in a watershed support beneficial uses. Diversity of aquatic resources includes both the types of aquatic resources and the locations of those aquatic resources in a 676 677 watershed. Consideration is also given to understanding historic and potential aquatic resource 678 conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections 679 between aquatic resources. The watershed approach can be used to evaluate avoidance and 680 minimization of direct, indirect, secondary (indirect), and cumulative project impacts. It also can be
- used in determining compensatory mitigation requirements. 681

Watershed Plan means a document, or a set of documents, developed in consultation with relevant stakeholders, for thea specific goal of which is aquatic resource restoration, establishment, enhancement, and preservation within a watershed. A watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder interests, and land uses. Watershed plans should include information about implementing the watershed plan. Watershed plans may also identify priority sites for aquatic resource restoration and protection. Examples of watershed plans include special area management plans, advance identification programs, and wetland management plans. The permitting authority may approve the use of HCPs and NCCPs other plans, including for example, Habitat Conservation Plans (HCPs), Natural Community Conservation Plans (NCCPs), or municipal stormwater permit watershed management programs as watershed plans, if they substantially meet the stated above. Any NCCP approved by the California Department of Fish and Wildlife before December 31. 2020, and any regional HCP approved by the United States Fish and Wildlife Service before December 31, 2020, which includes biological goals for aquatic resources, shall be used by the permitting

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authority as a watershed plan for such aquatic resources, unless the permitting authority determines in
 writing that the HCP or NCCP does not substantially meet the definition of a watershed plan for such
 aquatic resources.

**Watershed Profile** means a compilation of data or information on the abundance, diversity, and condition of aquatic resources in a project evaluation area. The watershed profile shall include a map and a report characterizing the location, abundance and diversity of aquatic resources in the project evaluation area, assessing the condition of aquatic resources in the project evaluation area, and describing the environmental stress factors affecting that condition.

The watershed profile shall include information sufficient to evaluate direct, secondary (indirect), and cumulative impacts of project and factors that may favor or hinder the success of compensatory mitigation projects, and help define watershed goals. It may include such things as current trends in habitat loss or conservation, cumulative impacts of past development activities, current development trends, the presence and need of sensitive species, and chronic environmental problems or site conditions such as flooding or poor water quality.

The scope and detail of the watershed profile shall be commensurate with the magnitude of impact associated with the proposed project. Information sources include online searches, maps, watershed plans, and possibly some fieldwork if necessary. In some cases, field data may need to be collected in the project evaluation area to confirm the reported condition. Some or all of the information may be obtained from a watershed plan. Watershed profiles for subsequent projects in a watershed can be used to track the cumulative effectiveness of the permitting authority's decisions.

Wetland Delineation means the application of a technical and procedural method to identify the
 boundary of a wetland area within a specified study site by identifying the presence or absence of
 wetland indicators at multiple points at the site and by establishing boundaries that group together sets
 of points that share the same status as wetland versus non-wetland.

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#### Appendix A: State Supplemental Dredge or Fill Guidelines

It is the intent of the Water Boards to be consistent with the <u>U.S.</u> EPA's 404(b)(1) Guidelines where feasible. Due to jurisdictional and procedural differences, some modifications to the <u>U.S.</u> EPA's 404(b)(1) Guidelines were necessary. Generally, these changes or deletions were made to reduce redundancy (especially where sufficiently described elsewhere in these Procedures) and to account for other state requirements. Note that the numbering scheme of the <u>U.S.</u> EPA's 404(b)(1) Guidelines has been retained in these State Supplemental Dredge or Fill Guidelines for the benefit of practitioners who are familiar with the <u>federal\_U.S. EPA's 404(b)(1)</u> Guidelines. The State Supplemental Dredge or Fill Guidelines under these Procedures. The definitions contained herein apply to these Procedures, including the State Supplemental Dredge or Fill Guidelines.

#### 730 Subpart A – General<sup>16</sup>

731 § 230.3 Definitions.

- For purposes of these Procedures, the following terms shall have the meanings indicated:
  - (c) The terms aquatic environment and aquatic ecosystem mean waters of the state, including wetlands, that serve as habitat for interrelated and interacting communities and populations of plants and animals.
    - (h) The term discharge point means the point within the disposal site at which the dredged or fill material is released.
    - (i) The term disposal site means that portion of the "waters of the state" where the discharge of dredged or fill material is permitted and involves a bottom surface area and any overlying volume of water. In the case of wetlands or ephemeral streams on which surface water is not present, the disposal site consists of the wetland or ephemeral stream surface area.
    - (k) The term extraction site means the place from which the dredged or fill material proposed for discharge is to be removed.
    - (n) The term permitting authority means as defined above in the main text of these Procedures.
    - (q) The term practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.
    - (q1) <u>Special aquatic sites means those sites identified in subpart E.</u> Special aquatic sites are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. (See § 230.10 (a)(3))
- § 230.6 Adaptability<sup>17</sup>

<sup>16</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

<sup>&</sup>lt;sup>17</sup>-Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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- (a) The manner in which these Guidelines are used depends on the physical, biological, and chemical nature of the proposed extraction site, the material to be discharged, and the candidate disposal site, including any other important components of the ecosystem being evaluated. Documentation to demonstrate knowledge about the extraction site, materials to be extracted, and the candidate disposal site is an essential component of guideline application. These Guidelines allow evaluation and documentation for a variety of activities, ranging from those with large, complex impacts on the aquatic environment to those for which the impact is likely to be innocuous. It is unlikely that the Guidelines will apply in their entirety to any one activity, no matter how complex. It is anticipated that substantial numbers of applications will be for minor, routine activities that have little, if any, potential for significant degradation of the aquatic environment. It generally is not intended or expected that extensive testing, evaluation or analysis will be needed to make findings of compliance in such routine cases.
- (b) The Guidelines user, including the agency or agencies responsible for implementing the Guidelines, must recognize the different levels of effort that should be associated with varying degrees of impact and require or prepare commensurate documentation. The level of documentation should reflect the significance and complexity of the discharge activity.
- (c) An essential part of the evaluation process involves making determinations as to the relevance of any portion(s) of the Guidelines and conducting further evaluation only as needed. However, where portions of the Guidelines review procedure are "short form" evaluations, there still must be sufficient information (including consideration of both individual and cumulative impacts) to support the decision of whether to specify the site for disposal of dredged or fill material and to support the decision to curtail or abbreviate the evaluation process. The presumption against the discharge in § 230.1§ 230.10 applies to this decision-making.

#### Subpart B - Compliance with Guidelines<sup>18</sup>

§ 230.10 Restrictions on Discharge

- (a) No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.
  - (1) For the purpose of this requirement, practicable alternatives include, but are not limited to:
    - (i) Activities which do not involve a discharge of dredged or fill material to waters of the state or ocean waters;
    - (ii) Discharges of dredged or fill material at other locations in waters of the state or ocean waters;
  - (2) An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered.

<sup>&</sup>lt;sup>18</sup>Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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- (3) Where activity associated with a discharge which is proposed for a special aquatic site (as defined in subpart E) does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not "water dependent"), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.
- (b) No discharge of dredged or fill material shall be permitted if it:
  - (1) Causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable State water quality standard;
  - (2) Violates any applicable toxic effluent standard or prohibition under section 307 of the Clean Water Act;
- (c) No discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the state. Under these Guidelines, effects contributing to significant degradation considered individually or collectively, include:
  - (1) Significantly adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites;
  - (2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes.
  - (3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or
  - (4) Significantly adverse effects of the discharge of pollutants on recreational, aesthetic, and economic values.
- (d) No discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem. Subpart H identifies such possible steps.

#### Subpart E - Potential Impacts on Special Aquatic Sites

- 824 § 230.40 Sanctuaries and refuges<sup>19</sup>
- (a) Sanctuaries and refuges consist of areas designated under State and Federal laws or local ordinances to be managed principally for the preservation and use of fish and wildlife resources.
- 827 § 230.41 Wetlands.

<sup>19</sup>-Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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- 828 (a)(1) Wetlands are as defined above in the main text of these Procedures.
- 829 § 230.42 Mud Flats.
- 830 (a) Mud flats are broad flat areas along the sea coast and in coastal rivers to the head of tidal influence
- and inland lakes, ponds, and riverine systems. When mud flats are inundated, wind and wave action
- may resuspend bottom sediments. Coastal mud flats are exposed at extremely low tides and
- inundated at high tides with the water table at or near the surface of the substrate. The substrate of
- mud flats contains organic material and particles smaller in size than sand. They are either
- 835 unvegetated or vegetated only by algal mats.
- 836 § 230.43 Vegetated shallows.
- 837 (a) Vegetated shallows are permanently inundated areas that under normal circumstances support
- 838 communities of rooted aquatic vegetation, such as turtle grass and eel grass in estuarine or marine
- 839 systems as well as a number of freshwater species in rivers and lakes.
- § 230.45 Riffle and Pool Complexes.
- 841 (a) Steep gradient sections of streams are sometimes characterized by riffle and pool complexes. Such
- 842 stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over
- a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen
- levels in the water. Pools are deeper areas associated with riffles. Pools are characterized by a slower
- stream velocity, a streaming flow, a smooth surface, and a finer substrate. Riffle and pool complexes
- are particularly valuable habitat for fish and wildlife.

#### **Subpart H – Actions to Minimize Adverse Effects**

- Note: There are many actions which can be undertaken in response to 230.10(d) to minimize the
- adverse effects of discharges of dredged or fill material. Some of these, grouped by type of activity,
- are listed in this subpart. Additional criteria for compensation measures are provided in subpart J of
- 851 these procedures Procedures.

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- 852 § 230.70 Actions concerning the location of the discharge.
- The effects of the discharge can be minimized by the choice of the disposal site. Some of the ways to accomplish this are by:
  - (a) Locating and confining the discharge to minimize smothering of organisms;
  - (b) Designing the discharge to avoid a disruption of periodic water inundation patterns;
  - (c) Selecting a disposal site that has been used previously for dredged material discharge;
- (d) Selecting a disposal site at which the substrate is composed of material similar to that being discharged, such as discharging sand on sand or mud on mud;
- (e) Selecting a disposal site, the discharge point, and the method of discharge to minimize the extent of any plume;
- (f) Designing the discharge of dredged or fill material to minimize or prevent the creation of standing bodies of water in areas of normally fluctuating water levels, and minimize or prevent the drainage of areas subject to such fluctuations.

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865	§ 230.71 Actions concerning the material to be discharged <sup>20</sup>
866 867	The effects of a discharge can be minimized by treatment of, or limitations on the material itself, such as:
868 869	(a) Disposal of dredged material in such a manner that physiochemical conditions are maintained and the potency and availability of pollutants are reduced.
870 871	(b) Limiting the solid, liquid, and gaseous components of material to be discharged at a particular site;
872	(c) Adding treatment substances to the discharge material;
873 874	(d) Utilizing chemical flocculants to enhance the deposition of suspended particulates in diked disposal areas.
875	§ 230.72 Actions controlling the material after discharge.
876	The effects of the dredged or fill material after discharge may be controlled by:
877 878 879	(a) Selecting discharge methods and disposal sites where the potential for erosion, slumping or leaching of materials into the surrounding aquatic ecosystem will be reduced. These sites or methods include, but are not limited to:
880	(1) Using containment levees, sediment basins, and cover crops to reduce erosions:
881 882	(2) Using lined containment areas to reduce leaching where leaching of chemical constituents from the discharged material is expected to be a problem;
883 884	(b) Capping in-place contaminated material with clean material or selectively discharging the most contaminated material first to be capped with the remaining material;
885 886	(c) Maintaining and containing discharged material properly to prevent point and nonpoint sources of pollution;
887 888	(d) Timing the discharge to minimize impact, for instance during periods of unusual high $\pm$ water flows, wind, wave, and tidal actions.
889	§ 230.73 Actions affecting the method of dispersion.
890	The effects of a discharge can be minimized by the manner in which it is dispersed, such as:
891 892	(a) Where environmentally desirable, distributing the dredged material widely in a thin layer at the disposal site maintain natural substrate contours and elevation;
893 894 895	(b) Orienting a dredged or fill material mound to minimize undesirable obstruction to the water current or circulation pattern, and utilizing natural bottom contours to minimize the size of the mound;
896 897	(c) Using silt screens or other appropriate methods to confine suspended particulate/turbidity to a small area where settling or removal can occur;

(d) Making use of currents and circulation patterns to mix, disperse and dilute the discharge;

<sup>&</sup>lt;sup>20</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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- (e) Minimizing water column turbidity by using a submerged diffuser system. A similar effect can be accomplished by submerging pipeline discharges or otherwise releasing materials near the bottom;
  - (f) Selecting sites or managing discharges to confine and minimize the release of suspended particulates to give decreased turbidity levels and to maintain light penetration for organisms;
  - (g) Setting limitations on the amount of material to be discharged per unit of time or volume of receiving water.
  - § 230.74 Actions related to technology.

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Discharge technology should be adapted to the needs of each site. In determining whether the discharge operation sufficiently minimizes adverse environmental impacts, the applicant should consider:

- (a) Using appropriate equipment or machinery, including protective devices, and the use of such equipment or machinery in activities related to the discharge of dredged or fill material;
- (b) Employing appropriate maintenance and operation on equipment or machinery, including adequate training, staffing, and working procedures;
- (c) Using machinery and techniques that are especially designed to reduce damage to wetlands. This may include machines equipped with devices that scatter rather than mound excavated materials, machines with specially designed wheels or tracks, and the use of mats under heavy machines to reduce wetland surface compaction and rutting;
- (d) Designing access roads and channels spanning structures using culverts, open channels, and diversions that will pass both low and high <u>\_</u>water flows, accommodate fluctuating water levels, and maintain circulation and faunal movement:
- (e) Employing appropriate machinery and methods of transport of the material for discharge.
- § 230.75 Actions affecting plant and animal populations.<sup>24</sup>

Minimization of adverse effects on populations of plant and animals can be achieved by:

- (a) Avoiding changes in water current and circulation patterns which would interfere with the movement of animals;
- (b) Selecting sites or managing discharges to prevent or avoid creating habitat conducive to the development of undesirable predators or species which have a competitive edge ecologically over indigenous plants or animals;
- (c) Avoiding sites having unique habitat or other value, including habitat of threatened or endangered species;
- (d) Using planning and construction practices to institute habitat development and restoration to produce a new or modified environmental state of higher ecological value by displacement of some or all of the existing environmental characteristics. Habitat development and restoration techniques can be used to minimize adverse impacts and to compensate for destroyed habitat. Additional criteria for compensation measures are provided in subpart J of this part. Use techniques that have

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<sup>&</sup>lt;sup>24</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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been demonstrated to be effective in circumstances similar to those under consideration wherever possible. Where proposed development and restoration techniques have not yet advanced to the pilot demonstration stage, initiate their use on a small scale to allow corrective action if unanticipated adverse impacts occur;

- (e) Timing discharge to avoid spawning or migration seasons and other biologically critical time periods;
- (f) Avoiding the destruction of remnant natural sites within areas already affected by development.
- § 230.76 Actions affecting human use.

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- Minimization of adverse effects on human use potential may be achieved by:
  - (a) Selecting discharge sites and following discharge procedures to prevent or minimize any potential damage to the aesthetically pleasing features of the aquatic site (e.g. viewscapes), particularly with respect to water quality;
  - (b) Selecting disposal sites which are not valuable as natural aquatic areas;
  - (c) Timing the discharge to avoid the seasons or periods when human recreational activity associated with the aquatic site is most important;
  - (d) Following discharge procedures which avoid or minimize the disturbance of aesthetic features on an aquatic site or ecosystem;
  - (e) Selecting sites that will not be detrimental or increase incompatible human activity, or require the need for frequent dredge or fill maintenance activity in remote fish and wildlife areas;
  - (f) Locating the disposal site outside of the vicinity of a public water supply intake.
- § 230.77 Other actions.
  - (a) In the case of fills, controlling runoff and other discharges from activities to be conducted on the fill:
  - (b) In the case of dams, designing water releases to accommodate the needs of fish and wildlife;
  - (c) In dredging projects funded by Federal agencies other than the Corps of Engineers, maintain desired water quality of the return discharge through agreement with the Federal funding authority on scientifically defensible pollutant concentration levels in addition to any applicable water quality standards;
  - (d) When a significant ecological change in the aquatic environment is proposed by the discharge of dredged or fill material, the permitting authority should consider the ecosystem that will be lost as well as the environmental benefits of the new system.

#### Subpart J – Compensatory Mitigation for Losses of Aquatic Resources<sup>22</sup>

- § 230.91 Purpose and general considerations.
  - (a) Purpose.

Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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969 (1) The purpose of this subpart is to establish standards and criteria for the use of all types of compensatory mitigation, including on-site and off-site permittee-responsible mitigation, 970 971 mitigation banks, and in-lieu fee mitigation to offset unavoidable impacts to waters of the state authorized through the issuance of Orders. 972 973 (d) Accounting for regional variations. Where appropriate, the permitting authority shall account for regional characteristics of aquatic resource types, functions and services when determining 974 975 performance standards and monitoring requirements for compensatory mitigation projects. 976 § 230.92 Definitions.<sup>23</sup> 977 For the purposes of this subpart, the following terms are defined: 978 Adaptive management means the development of a management strategy that anticipates likely 979 challenges associated with compensatory mitigation projects and provides for the implementation of 980 actions to address those challenges, as well as unforeseen changes to those projects. It requires 981 consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and 982 guides modification of those projects to optimize performance. It includes the selection of appropriate 983 measures that will ensure that the aquatic resource functions are provided and involves analysis of 984 monitoring results to identify potential problems of a compensatory mitigation project and the identification and implementation of measures to rectify those problems. 985 986 Buffer means an upland, wetland, and/or riparian area that protects and/or enhances aquatic 987 resource functions associated with waters of the state from disturbances associated with adjacent 988 land uses. 989 Compensatory mitigation means the restoration (re-establishment or rehabilitation), establishment 990 (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the 991 purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. 992 993 Compensatory mitigation project means compensatory mitigation implemented by the permittee as a 994 requirement of an Order (i.e., permittee-responsible mitigation), or by a mitigation bank or an in-lieu 995 fee program. 996 Condition means the relative ability of an aquatic resource to support and maintain a community of 997 organisms having a species composition, diversity, and functional organization comparable to 998 reference aquatic resources in the region. 999 Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric) 1000 representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The 1001 measure of aquatic functions is based on the resources restored, established, enhanced, or 1002 preserved. 1003 Days means calendar days.

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1004 1005 1006	Debit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the loss of aquatic functions at an impact or project site. The measure of aquatic functions is based on the resources impacted by the authorized activity.
1007 1008 1009 1010 1011	Enhancement means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area. <sup>24</sup>
1012 1013 1014	Establishment (creation) means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area and functions.
1015 1016	Functional capacity means the degree to which an area of aquatic resource performs a specific function.
1017	Functions means the physical, chemical, and biological processes that occur in ecosystems.
1018	Impact means adverse effect.
1019	In-kind means a resource of a similar structural and functional type to the impacted resource.
1020 1021 1022 1023 1024 1025 1026	In-lieu fee program means a program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for Orders. Similar to a mitigation bank, an in-lieu fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor. However, the rules governing the operation and use of in-lieu fee programs are somewhat different from the rules governing operation and use of mitigation banks. The operation and use of an in-lieu fee program are governed by an in-lieu fee program instrument.
1028 1029	In-lieu fee program instrument means the legal document for the establishment, operation, and use of an in-lieu fee program.
1030	Instrument means mitigation banking instrument or in-lieu fee program instrument.
1031 1032 1033 1034 1035 1036	Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by Orders. In general, a mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are governed by a mitigation banking instrument.
1037 1038	Mitigation banking instrument means the legal document for the establishment, operation, and use of an in-lieu fee program.

Off-site means an area that is neither located on the same parcel of land as the impact site, nor on a

parcel of land contiguous to the parcel containing the impact site.

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<sup>&</sup>lt;sup>24</sup>-Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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1041 1042	On-site means an area located on the same parcel of land as the impact site, or on a parcel of land contiguous to the impact site.
1043	Out-of-kind means a resource of a different structural and functional type from the impacted resource.
1044 1045 1046	Performance standards are observable or measurable physical (including hydrological), chemical and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives. <sup>25</sup>
1047 1048 1049	Permittee-responsible mitigation means an aquatic resource restoration, establishment, enhancement, and/or preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility.
1050 1051 1052 1053	Preservation means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.
1054 1055 1056 1057	Re-establishment means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Reestablishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.
1058 1059 1060	Reference aquatic resources are a set of aquatic resources that represent the full range of variability exhibited by a regional class of aquatic resources as a result of natural processes and anthropogenic disturbances.
1061 1062 1063	Rehabilitation means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.
1064 1065 1066 1067	Restoration means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: reestablishment and rehabilitation.
1068 1069	Riparian areas are lands adjacent to waters of the state. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality.
1070 1071	Service area means the geographic area within which impacts can be mitigated at a specific mitigation bank or an in-lieu fee program, as designated in its instrument.
1072	Services mean the benefits that human populations receive from functions that occur in ecosystems.
1073 1074	Sponsor means any public or private entity responsible for establishing, and in most circumstances, operating a mitigation bank or in-lieu fee program.
1075	Temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted

impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Higher compensation ratios may be required to compensate for temporal loss. When the

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<sup>&</sup>lt;sup>25</sup>-Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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1078 compensatory mitigation project is initiated prior to, or concurrent with, the permitted impacts, the 1079 permitting authority may determine that compensation for temporal loss is not necessary, unless the 1080 resource has a long development time.

Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.<sup>26</sup>

Watershed approach is defined above in the main text of these Procedures.

Watershed plan is defined above in the main text of these Procedures.

§ 230.93 General compensatory mitigation requirements.

#### (a) General Considerations.

- (1) The fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to waters of the state authorized by Orders. The permitting authority must determine the compensatory mitigation to be required in an Order, based on what would be environmentally preferable. In making this determination, the permitting authority must assess the likelihood for ecological success and sustainability, and the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project. In many cases, the environmentally preferable compensatory mitigation may be provided through mitigation banks or in-lieu fee programs because they usually involve consolidating compensatory mitigation projects where ecologically appropriate, consolidating resources, providing financial planning and scientific expertise (which often is not practical for permittee-responsible compensatory mitigation projects), reducing temporal losses of functions, and reducing uncertainty over project success. Compensatory mitigation requirements must be commensurate with the amount and type of impact that is associated with a particular Order. Applicants are responsible for proposing an appropriate compensatory mitigation option to offset unavoidable impacts.
- (2) Compensatory mitigation may be performed using methods <u>erof</u> restoration, enhancement, establishment, and in certain circumstances preservation. Restoration should generally be the first option considered because the likelihood of success is greater and the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation.
- (3) Compensatory mitigation projects may be sited on public or private lands. Credits for compensatory mitigation projects on public land must be based solely on aquatic resource functions provided by the compensatory mitigation project, over and above those provided by public programs already planned or in place. All compensatory mitigation projects must comply with the standards in section IV of these Procedures, if they are to be used to provide

<sup>&</sup>lt;sup>26</sup>-Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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compensatory mitigation for activities authorized by Orders, regardless of whether they are sited on public or private lands and whether the sponsor is a governmental or private entity.

- (b) Type and location of compensatory mitigation.<sup>27</sup>
  - (1) In general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services, taking into account such watershed scale features as aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including the availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses. When compensating for impacts to marine resources, the location of the compensatory mitigation site should be chosen to replace lost functions and services within the same marine ecological system (e.g., reef complex, littoral drift cell). Compensation for impacts to aquatic resources in coastal watersheds (watersheds that include a tidal water body) should also be located in a coastal watershed where practicable. Compensatory mitigation projects should not be located where they will increase risks to aviation by attracting wildlife to areas where aircraft-wildlife strikes may occur (e.g., near airports).
  - (2) Mitigation bank credits. When permitted impacts are located within the service area of an approved mitigation bank, and the bank has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor. Since an approved instrument (including an approved mitigation plan and appropriate real estate and financial assurances) for a mitigation bank is required to be in place before its credits can begin to be used to compensate for authorized impacts, use of a mitigation bank can help reduce risk and uncertainty, as well as temporal loss of resource functions and services. Mitigation bank credits are not released for debiting until specific milestones associated with the mitigation bank site's protection and development are achieved. thus use of mitigation bank credits can also help reduce risk that mitigation will not be fully successful. Mitigation banks typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permitteeresponsible mitigation. Also, development of a mitigation bank requires site identification in advance, project-specific planning, and significant investment of financial resources that is often not practicable for many in-lieu fee programs. For these reasons, the permitting authority should give preference to the use of mitigation bank credits when these considerations are applicable. However, these same considerations may also be used to override this preference, where appropriate, as, for example, where an in-lieu fee program has released credits available from a specific approved in-lieu fee project, or a permittee-responsible project will restore an outstanding resource based on rigorous scientific and technical analysis.
  - (3) In-lieu fee program credits. Where permitted impacts are located within the service area of an approved in-lieu fee program, and the sponsor has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor. Where permitted impacts are not located in the service

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<sup>27-</sup>Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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area of an approved mitigation bank, or the approved mitigation bank does not have the appropriate number and resource type of credits available to offset those impacts, in-lieu fee mitigation, if available, is generally preferable to permittee-responsible mitigation. In-lieu fee projects typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. They also devote significant resources to identifying and addressing high-priority resource needs on a watershed scale, as reflected in their compensation planning framework. For these reasons, the permitting authority should give preference to in-lieu fee program credits over permittee-responsible mitigation, where these considerations are applicable. However, as with the preference for mitigation bank credits, these same considerations may be used to override this preference where appropriate. Additionally, in cases where permittee-responsible mitigation is likely to successfully meet performance standards before advance credits secured from an in-lieu fee program are fulfilled, the permitting authority should also give consideration to this factor in deciding between in-lieu fee mitigation and permittee-responsible mitigation.

- (4) Permittee-responsible mitigation under a watershed approach. Where permitted impacts are not in the service area of an approved mitigation bank or in-lieu fee program that has the appropriate number and resource type of credits available, permittee-responsible mitigation is the only option. Where practicable and likely to be successful and sustainable, the resource type and location for the required permittee-responsible compensatory mitigation should be determined using the principles of a watershed approach as outlined in paragraph (c) of this section.
- (5) Permittee-responsible mitigation through on-site and in-kind mitigation. In cases where a watershed approach is not practicable, the permitting authority should consider opportunities to offset anticipated aquatic resource impacts by requiring on-site and in-kind compensatory mitigation. The permitting authority must also consider the practicability of on-site compensatory mitigation and its compatibility with the proposed project.
- (6) Permittee-responsible mitigation through off-site and/or out-of-kind mitigation. If, after considering opportunities for on-site, in-kind compensatory mitigation as provided in paragraph (b)(5) of this section, the permitting authority determines that these compensatory mitigation opportunities are not practicable, are unlikely to compensate for the permitted impacts, or will be incompatible with the proposed project, and an alternative, practicable off-site and/or out-of-kind mitigation opportunity is identified that has a greater likelihood of offsetting the permitted impacts or is environmentally preferable to on-site or in-kind mitigation, the permitting authority should require that this alternative compensatory mitigation be provided.
- (c) Watershed approach to compensatory mitigation.<sup>28</sup>
  - (1) The permitting authority must use a watershed approach to establish compensatory mitigation requirements in Orders as described in the main text of the Procedures. Where a watershed plan is available, the permitting authority will determine whether the plan meets the

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<sup>&</sup>lt;sup>28</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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definition of watershed plan in the Procedures and therefore is appropriate for use in the watershed approach for compensatory mitigation. In cases where the permitting authority determines that an appropriate watershed plan is available, the watershed approach should be based on that plan. Where no such plan is available, the watershed approach should be based on information provided by the project sponsor or available from other sources. The ultimate goal of a watershed approach is to maintain and improve the abundance, diversity, and condition of aquatic resources within watersheds through strategic selection of compensatory mitigation sites.

#### (2) Considerations.

- (i) A watershed approach to compensatory mitigation considers the importance of condition, landscape position and resource type of compensatory mitigation projects for the sustainability of aquatic resource functions within the watershed. Such an approach considers how the condition, types, and locations of compensatory mitigation projects will provide the desired aquatic resource functions, and will continue to function over time in a changing landscape. It also considers the habitat requirements of important species, habitat loss or conversion trends, sources of watershed impairment, and current development trends, as well as the requirements of other regulatory and non-regulatory programs that affect the watershed, such as storm water management or habitat conservation programs. It includes the protection and maintenance of terrestrial resources, such as non-wetland riparian areas and uplands, when those resources contribute to or improve the overall ecological functioning of aquatic resources in the watershed. Compensatory mitigation requirements determined through the watershed approach should not focus exclusively on specific functions (e.g., water quality or habitat for certain species), but should provide, where practicable, the suite of functions typically provided by the affected aquatic resource.
- (ii) Locational factors (e.g., hydrology, surrounding land use) are important to the success of compensatory mitigation for impacted habitat functions and may lead to siting of such mitigation away from the project area. However, consideration should also be given to functions and services (e.g., water quality, flood control, shoreline protection) that will likely need to be addressed at or near the areas impacted by the permitted impacts.<sup>29</sup>
- (iii) A watershed approach may include on-site compensatory mitigation, off-site compensatory mitigation (including mitigation banks or in-lieu fee programs), or a combination of on-site and off-site compensatory mitigation.
- (iv) A watershed approach to compensatory mitigation should include, to the extent practicable, inventories of historic and existing aquatic resources, including identification of degraded aquatic resources, and identification of immediate and long-term aquatic resource needs within watersheds that can be met through permittee-responsible mitigation projects, mitigation banks, or in-lieu fee programs. Planning efforts should identify and prioritize aquatic resource restoration, establishment, and enhancement activities, and preservation of

<sup>&</sup>lt;sup>29</sup>Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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1228 existing aquatic resources that are important for maintaining or improving ecological functions of the watershed. The identification and prioritization of resource needs should be as specific 1229 1230 as possible, to enhance the usefulness of the approach in determining compensatory 1231 mitigation requirements. 1232 (v) A watershed approach is not appropriate in areas where watershed boundaries do not 1233 exist, such as marine areas. In such cases, an appropriate spatial scale should be used to 1234 replace lost functions and services within the same ecological system (e.g., reef complex, 1235 littoral drift cell). 1236 (3) Information Needs. 1237 (i) In the absence of a watershed plan determined by the permitting authority under 1238 paragraph (c)(1) of this section to be appropriate for use in the watershed approach, the 1239 permitting authority will use a watershed approach based on analysis of information regarding watershed conditions (as identified in the watershed profile) and needs, including 1240 potential sites for aquatic resource restoration activities and priorities for aquatic resource 1241 1242 restoration and preservation. Such information includes: Current trends in habitat loss or 1243 conversion; cumulative impacts of past development activities, current development trends, the presence and needs of sensitive species; site conditions that favor or hinder the success 1244 of compensatory mitigation projects; and chronic environmental problems such as flooding or 1245 1246 poor water quality. 1247 (ii) This information may be available from sources such as wetland maps; soil surveys; U.S. 1248 Geological Survey topographic and hydrologic maps; aerial photographs; information on rare, endangered and threatened species and critical habitat; local ecological reports or studies; 1249 1250 and other information sources that could be used to identify locations for suitable 1251 compensatory mitigation projects in the watershed. 1252 (iii) The level of information and analysis needed to support a watershed approach must be commensurate with the scope and scale of the proposed impacts requiring an Order, as well 1253 1254 as the functions lost as a result of those impacts. 1255 (4) Watershed Scale. The size of watershed addressed using a watershed approach should not 1256 be larger than is appropriate to ensure that the aquatic resources provided through 1257 compensation activities will effectively compensate for adverse environmental impacts resulting 1258 from activities authorized by Orders. The permitting authority should consider relevant 1259 environmental factors and appropriate locally-developed standards and criteria when 1260 determining the appropriate watershed scale in guiding compensation activities.

(d) Site selection.30

<sup>&</sup>lt;sup>30</sup>-Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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1262 1263	(1) The compensatory mitigation project site must be ecologically suitable for providing the desired aquatic resource functions. In determining the ecological suitability of the compensatory
1264 1265	mitigation project site, the permitting authority must consider, to the extent practicable, the following factors:
1266	(i) Hydrological conditions, soil characteristics, and other physical and chemical
1267	characteristics;
1268	(ii) Watershed-scale features, such as aquatic habitat diversity, habitat connectivity, and
1269	other landscape scale functions;
1270	(iii) The size and location of the compensatory mitigation site relative to hydrologic sources
1271	(including the availability of water rights) and other ecological features;
1272	(iv) Compatibility with adjacent land uses and watershed management plans;
1273	(v) Reasonably foreseeable effects the compensatory mitigation project will have on
1274	ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat, mature
1275	forests), cultural sites, or habitat for federally- or state-listed threatened and endangered
1276	species; and
1277	(vi) Other relevant factors including, but not limited to, development trends, anticipated land
1278	use changes, habitat status and trends, the relative locations of the impact and mitigation
1279	sites in the stream network, local or regional goals for the restoration or protection of
1280	particular habitat types or functions (e.g., re-establishment of habitat corridors or habitat for
1281	species of concern), water quality goals, floodplain management goals, and the relative
1282	potential for chemical contamination of the aquatic resources.
1283	(2) Permitting authorities may require on-site, off-site, or a combination of on-site and off-site
1284	compensatory mitigation to replace permitted losses of aquatic resource functions and services.
1285	(3) Applicants should propose compensation sites adjacent to existing aquatic resources or
1286	where aquatic resources previously existed.
1287	(e) Mitigation type.
1288	(1) In general, in-kind mitigation is preferable to out-of-kind mitigation because it is most likely to
1289	compensate for the functions and services lost at the impact site. For example, tidal wetland
1290	compensatory mitigation projects are most likely to compensate for unavoidable impacts to tidal
1291	wetlands, while perennial stream compensatory mitigation projects are most likely to
1292	compensate for unavoidable impacts to perennial streams. Thus, except as provided in
1293	paragraph (e)(2) of this section, the required compensatory mitigation shall be of a similar type
1294	to the affected aquatic resource.
1295	(2) If the permitting authority determines, using the watershed approach in accordance with
1296	paragraph (c) of this section that out-of-kind compensatory mitigation will serve the aquatic

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1297 resource needs of the watershed, the permitting authority may authorize the use of such out-ofkind compensatory mitigation. The basis for authorization of out-of-kind compensatory 1298 1299 mitigation must be documented in the administrative record for the Order action. 1300 (3) For difficult-to-replace resources (e.g., bogs, fens, springs, streams, vegetated seasonal 1301 wetlands, slope and seep wetlands, vernal pools, and wet meadows) if further avoidance and 1302 minimization is not practicable, the required compensation should be provided, if practicable, 1303 through in-kind rehabilitation, enhancement, or preservation since there is greater certainty that 1304 these methods of compensation will successfully offset permitted impacts. 1305 (f) Amount of compensatory mitigation. 1306 (1) If the permitting authority determines that compensatory mitigation is necessary to offset 1307 unavoidable impacts to aquatic resources, the amount of required compensatory mitigation 1308 must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases 1309 where appropriate functional or condition assessment methods or other suitable metrics are 1310 available, these methods should be used where practicable to determine how much 1311 compensatory mitigation is required. If a functional or condition assessment or other suitable 1312 metric is not used, a minimum one-to-one acreage or linear foot compensation ratio must be 1313 used. 1314 (2) The permitting authority must require a mitigation ratio greater than one-to-one where 1315 necessary to account for the method of compensatory mitigation (e.g., preservation), the 1316 likelihood of success, differences between the functions lost at the impact site and the functions 1317 expected to be produced by the compensatory mitigation project, temporal losses of aquatic 1318 resource functions, the difficulty of restoring or establishing the desired aquatic resource type 1319 and functions, and/or the distance between the affected aquatic resource and the compensation 1320 site. The rationale for the required replacement ratio must be documented in the administrative record for the Order action. 1321 1322 (3) If an in-lieu fee program will be used to provide the required compensatory mitigation, and 1323 the appropriate number and resource type of released credits are not available, the permitting 1324 authority must require sufficient compensation to account for the risk and uncertainty associated 1325 with in-lieu fee projects that have not been implemented before the permitted impacts have 1326 occurred. 1327 (g) Use of mitigation banks and in-lieu fee programs. Mitigation banks and in-lieu fee programs 1328 may be used to compensate for impacts to aquatic resources authorized by general Orders and 1329 individual Orders in accordance with the preference hierarchy in paragraph (b) of this section. 1330 Mitigation banks and in-lieu fee programs may also be used to satisfy requirements arising out of an 1331 enforcement action, such as supplemental environmental projects.

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1000	(b) Decreased and 34
1332	(h) Preservation. <sup>31</sup>
1333	(1) Preservation may be used to provide compensatory mitigation for activities authorized by
1334	Orders when all the following criteria are met:
1335	(i) The resources to be preserved provide important physical, chemical, or biological
1336	functions for the watershed;
1337	(ii) The resources to be preserved contribute significantly to the ecological sustainability of
1338	the watershed. In determining the contribution of those resources to the ecological
1339	sustainability of the watershed, the permitting authority must use appropriate quantitative
1340	assessment tools where available;
1341	(iii) Preservation is determined by the permitting authority to be appropriate and practicable;
1342	(iv) The resources are under threat of destruction or adverse modifications; and
1343	(v) The preserved site will be permanently protected through an appropriate real estate or
1344	other legal instrument (e.g., easement, title transfer to state resource agency or land trust).
1345	(2) Where preservation is used to provide compensatory mitigation, to the extent appropriate
1346	and practicable the preservation shall be done in conjunction with aquatic resource restoration,
1347	establishment, and/or enhancement activities. This requirement may be waived by the
1348	permitting authority where preservation has been identified as a high priority using a watershed
1349	approach described in paragraph (c) of this section, but compensation ratios shall be higher.
1350	(i) Buffers. The permitting authority may require the restoration, establishment,
1351	enhancement, and preservation, as well as the maintenance, of riparian areas and/or buffers
1352	around aquatic resources where necessary to ensure the long-term viability of those
1353	resources. Buffers may also provide habitat or corridors necessary for the ecological
1354	functioning of aquatic resources. If buffers are required by the permitting authority as part of
1355	the compensatory mitigation project, compensatory mitigation credit will be provided for those
1356	buffers, as provided in section IV B.5 (c).
1357	(j) Relationship to other federal, tribal, state, and local programs.
1358	(1) Compensatory mitigation projects for Orders may also be used to satisfy the environmental
1359	requirements of other programs, such as tribal, state, or local wetlands regulatory programs,
1360	other federal programs such as the Surface Mining Control and Reclamation Act, Corps civil
1361	works projects, and Department of Defense military construction projects, consistent with the
1362	terms and requirements of these programs and subject to the following considerations:

<sup>31.</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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1363	(i) The compensatory mitigation project must include appropriate compensation required by
1364	the Order for unavoidable impacts to aquatic resources authorized by that Order.
1365	(ii) Under no circumstances may the same credits be used to provide mitigation for more than
1366	one permitted activity. However, where appropriate, compensatory mitigation projects,
1367	including mitigation banks and in-lieu fee projects, may be designed to holistically address
1368	requirements under multiple programs and authorities for the same activity.
1369	(2) Except for projects undertaken by federal agencies, or where federal funding is specifically
1370	authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or
1371	conservation projects undertaken for purposes other than compensatory mitigation, such as the
1372	Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program
1373	activities, cannot be used for the purpose of generating compensatory mitigation credits for
1374	activities authorized by Orders. However, compensatory mitigation credits may be generated by
1375	activities undertaken in conjunction with, but supplemental to, such programs in order to
1376	maximize the overall ecological benefits of the restoration or conservation project.
1377	(3) Compensatory mitigation projects may also be used to provide compensatory mitigation
1378	under the federal and state Endangered Species Act or for Natural Community Conservation
1379	Plans and Habitat Conservation Plans, as long as they comply with the requirements of
1380	paragraph (j)(1) of this section.
1381	(k) Order conditions.
1382	(1) The compensatory mitigation requirements for an Order, including the amount and type of
1383	compensatory mitigation, must be clearly stated in the special conditions of the individual Order
1384	or authorization to use the general Order. The special conditions must be enforceable. 32
1385	(2) For an Order that requires permittee-responsible mitigation, the special conditions must:
1386	(i) Identify the party responsible for providing the compensatory mitigation;
1387 1388	(ii) Incorporate, by reference, the final or draft mitigation plan approved by the permitting authority;
1300	authority,
1389	(iii) State the objectives, performance standards, and monitoring required for the
1390	compensatory mitigation project, unless they are provided in the approved final mitigation
1391	plan; and
1392	(iv) Describe any required financial assurances or long-term management provisions for the
1393	compensatory mitigation project, unless they are specified in the approved final mitigation

plan.

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- (4) If a mitigation bank or in-lieu fee program is used to provide the required compensatory mitigation, the special conditions must indicate whether a mitigation bank or in-lieu fee program will be used, and specify the number and resource type of credits the permittee is required to secure. In the case of an individual Order, the special condition must also identify the specific mitigation bank or in-lieu fee program that will be used. For authorizations to use a general Order, the special conditions may either identify the specific mitigation bank or in-lieu fee program, or state that the specific mitigation bank or in-lieu fee program used to provide the required compensatory mitigation must be approved by the permitting authority before the credits are secured.
- (I) Party responsible for compensatory mitigation.

- (1) For permittee-responsible mitigation, the special conditions of the Order must clearly indicate the party or parties responsible for the implementation, performance, and long-term management of the compensatory mitigation project.
- (3) If use of a mitigation bank or in-lieu fee program is approved by the permitting authority to provide part or all of the required compensatory mitigation for an Order, the permittee retains responsibility for providing the compensatory mitigation until the appropriate number and resource type of credits have been secured from a sponsor and the permitting authority has received documentation that confirms that the sponsor has accepted the responsibility for providing the required compensatory mitigation. This documentation may consist of a letter or form signed by the sponsor, with the Order number and a statement indicating the number and resource type of credits that have been secured from the sponsor. Copies of this documentation will be retained in the administrative records for both the Order and the instrument. If the sponsor fails to provide the required compensatory mitigation, the permitting authority may pursue measures against the sponsor to ensure compliance.<sup>33</sup>
- (m) Timing. Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of or concurrent with the activity causing the authorized impacts. The permitting authority shall require, to the extent appropriate and practicable, additional compensatory mitigation to offset temporal losses of aquatic functions that will result from the permitted activity.
- (n) Financial assurances.
  - (1) The permitting authority shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. In cases where an alternate mechanism is available to ensure a high level of confidence that the compensatory mitigation will be provided and maintained (e.g., a formal, documented commitment from a government agency or public authority) the permitting authority may determine that financial assurances are not necessary for that compensatory mitigation project.

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- (2) The amount of the required financial assurances must be determined by the permitting authority, in consultation with the project sponsor, and must be based on the size and complexity of the compensatory mitigation project, the degree of completion of the project at the time of project approval, the likelihood of success, the past performance of the project sponsor, and any other factors the permitting authority deems appropriate. Financial assurances may be in the form of performance bonds, escrow accounts, casualty insurance, letters of credit, legislative appropriations for government sponsored projects, or other appropriate instruments, subject to the approval of the permitting authority. The rationale for determining the amount of the required financial assurances must be documented in the administrative record for either the Order or the instrument. In determining the assurance amount, the permitting authority shall consider the cost of providing replacement mitigation, including costs for land acquisition, planning and engineering, legal fees, mobilization, construction, and monitoring. (3) If financial assurances are required, the Order must include a special condition requiring the financial assurances to be in place prior to commencing the permitted activity.34 (4) Financial assurances shall be phased out once the compensatory mitigation project has been determined by the permitting authority to be successful in accordance with its performance standards. The Order or instrument must clearly specify the conditions under which the financial assurances are to be released to the permittee, sponsor, and/or other financial assurance provider, including, as appropriate, linkage to achievement of performance standards, adaptive management, or compliance with special conditions. (5) A financial assurance must be in a form that ensures that the permitting authority will receive notification at least 120 days in advance of any termination or revocation. For third-party assurance providers, this may take the form of a contractual requirement for the assurance provider to notify the permitting authority at least 120 days before the assurance is revoked or terminated.
  - (6) Financial assurances shall be payable at the direction of the permitting authority to his designee or to a standby trust agreement. When a standby trust is used (e.g., with performance bonds or letters of credit) all amounts paid by the financial assurance provider shall be deposited directly into the standby trust fund for distribution by the trustee in accordance with the permitting authority's instructions.
- (o) Compliance with applicable law. The compensatory mitigation project must comply with all applicable federal, state, and local laws. The Order, mitigation banking instrument, or in-lieu fee program instrument must not require participation by the permitting authority in project management, including receipt or management of financial assurances or long-term financing mechanisms, except as determined by the permitting authority to be consistent with its statutory authority, mission, and priorities.
- § 230.94 Planning and documentation.

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- (a) Pre-application consultations. Potential applicants for Orders are encouraged to participate in pre-application meetings with the permitting authority and appropriate agencies to discuss potential mitigation requirements and information needs.
- (c) Mitigation plan.

- (1) Preparation and Approval.
  - (i) For individual Orders, the permittee must prepare a draft mitigation plan and submit it to the permitting authority for review prior to certification issuing the Order. After addressing any comments provided by the permitting authority, the permittee must prepare a final mitigation plan, which must be approved by the permitting authority prior to commencing work in waters of the state. The approved final mitigation plan must be incorporated into the individual Order either as an attachment or by reference. The final mitigation plan must include the items described in paragraphs (c)(2) through (c)(14) of this section, but the level of detail of the mitigation plan should be commensurate with the scale and scope of the impacts. As an alternative, the permitting authority may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as Order conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and the name of the specific mitigation bank or in-lieu fee program to be used.<sup>36</sup>
  - (ii) For general Orders, if compensatory mitigation is required, the permitting authority may approve a conceptual or detailed compensatory mitigation plan to meet required time frames for general Order enrollments, but a final mitigation plan incorporating the elements in paragraphs (c)(2) through (c)(14) of this section, at a level of detail commensurate with the scale and scope of the impacts, must be approved by the permitting authority before the permittee commences work in waters of the state. As an alternative, the permitting authority may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as Order conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and either the name of the specific mitigation bank or in-lieu fee program to be used or a statement indicating that a mitigation bank or in-lieu fee program will be used (contingent upon approval by the permitting authority).
- (2) Objectives. A description of the resource type(s) and amount(s) that will be provided, the method of compensation (i.e., restoration, establishment, enhancement, and/or preservation), and the manner in which the resource functions of the compensatory mitigation project will address the needs of the watershed, ecoregion, physiographic province, or other geographic area of interest.
- (3) Site selection. A description of the factors considered during the site selection process. This should include consideration of watershed needs, on-site alternatives where applicable,

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and the practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the compensatory mitigation project site. (See § 230.93(d).)

- (4) Site protection instrument. A description of the legal arrangements and instrument, including site ownership, that will be used to ensure the long-term protection of the compensatory mitigation project site (see § 230.97(a)).<sup>36</sup>
- (5) Baseline information. A description of the ecological characteristics of the proposed compensatory mitigation project site and, in the case of an application for an Order, the impact site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate to the type of resource proposed as compensation. The baseline information should also include a delineation of waters of the state on the proposed compensatory mitigation project site. A prospective permittee planning to secure credits from an approved mitigation bank or inlieu fee program only needs to provide baseline information about the impact site, not the mitigation bank or in-lieu fee project site.
- (6) Determination of credits. A description of the number of credits to be provided, including a brief explanation of the rationale for this determination. (See § 230.93(f).)
  - (i) For permittee-responsible mitigation, this should include an explanation of how the compensatory mitigation project will provide the required compensation for unavoidable impacts to aquatic resources resulting from the permitted activity.
  - (ii) For permittees intending to secure credits from an approved mitigation bank or in-lieu fee program, it should include the number and resource type of credits to be secured and how these were determined.
- (7) Mitigation work plan. Detailed written specifications and work descriptions for the compensatory mitigation project, including, but not limited to, the geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate; soil management; and erosion control measures. For stream compensatory mitigation projects, the mitigation work plan may also include other relevant information, such as planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design discharge, and riparian area plantings.
- (8) Maintenance plan. A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.
- (9) Performance standards. Ecologically-based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives. (See § 230.95.)

<sup>&</sup>lt;sup>36</sup>-Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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- (10) Monitoring requirements. A description of parameters to be monitored in order to determine if the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting on monitoring results to the permitting authority must be included. (See § 230.96.)<sup>37</sup>
- (11) Long-term management plan. A description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management. (See § 230.97(d).)
- (12) Adaptive management plan. A management strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project, including the party or parties responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising compensatory mitigation plans and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect compensatory mitigation success. (See § 230.97(c).)
- (13) Financial assurances. A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards (see § 230.93(n)).
- (14) Other information. The permitting authority may require additional information as necessary to determine the appropriateness, feasibility, and practicability of the compensatory mitigation project.
- § 230.95 Ecological performance standards.

- (a) The approved mitigation plan must contain performance standards that will be used to assess whether the project is achieving its objectives. Performance standards should relate to the objectives of the compensatory mitigation project, so that the project can be objectively evaluated to determine if it is developing into the desired resource type, providing the expected condition or functions, and attaining any other applicable metrics (e.g., acres).
- (b) Performance standards must be based on attributes that are objective and verifiable. Ecological performance standards must be based on the best available science that can be measured or assessed in a practicable manner. Performance standards may be based on variables or measures of functional capacity or condition as described in assessment methodologies, measurements of hydrology or other aquatic resource characteristics, and/or comparisons to reference aquatic resources of similar type and landscape position. The use of reference aquatic resources to establish performance standards will help ensure that those performance standards are reasonably achievable, by reflecting the range of variability exhibited by the regional class of aquatic resources as a result of natural processes and anthropogenic disturbances. Performance standards based on measurements of hydrology should take into consideration the hydrologic variability exhibited by reference aquatic resources, especially wetlands. Where practicable, performance standards should take into account the expected stages of the aquatic resource

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development process, in order to allow early identification of potential problems and appropriate adaptive management.

§ 230.96 Monitoring.38

(a) General.

- (1) Monitoring the compensatory mitigation project site is necessary to determine if the project is meeting its performance standards, and to determine if measures are necessary to ensure that the compensatory mitigation project is accomplishing its objectives. The submission of monitoring reports to assess the development and condition of the compensatory mitigation project is required, but the content and level of detail for those monitoring reports must be commensurate with the scale and scope of the compensatory mitigation project, as well as the compensatory mitigation project type. The mitigation plan must address the monitoring requirements for the compensatory mitigation project, including the parameters to be monitored, the length of the monitoring period, the party responsible for conducting the monitoring, the frequency for submitting monitoring reports to the permitting authority, and the party responsible for submitting those monitoring reports to the permitting authority.
- (2) The permitting authority may conduct site inspections on a regular basis (e.g., annually) during the monitoring period to evaluate mitigation site performance.
- (b) Monitoring period. The mitigation plan must provide for a monitoring period that is sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years. A longer monitoring period must be required for aquatic resources with slow development rates (e.g., forested wetlands, bogs). Following project implementation, the permitting authority may reduce or waive the remaining monitoring requirements upon a determination that the compensatory mitigation project has achieved its performance standards. Conversely the permitting authority may extend the original monitoring period upon a determination that performance standards have not been met or the compensatory mitigation project is not on track to meet them. The permitting authority may also revise monitoring requirements when remediation and/or adaptive management is required.
- (c) Monitoring reports.
  - (1) The permitting authority must determine the information to be included in monitoring reports. This information must be sufficient for the permitting authority to determine how the compensatory mitigation project is progressing towards meeting its performance standards, and may include plans (such as as-built plans), maps, and photographs to illustrate site conditions. Monitoring reports may also include the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.
  - (2) The permittee or sponsor is responsible for submitting monitoring reports in accordance with the special conditions of the Order or the terms of the instrument. Failure to submit monitoring reports in a timely manner may result in compliance action by the permitting authority.

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(3) Monitoring reports must be provided by the permitting authority to interested federal, tribal, state, and local resource agencies, and the public, upon request.

§ 230.97 Management.39

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- (a) Site protection.
  - (1) The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms, as appropriate. Long-term protection may be provided through real estate instruments such as conservation easements held by entities such as federal, tribal, state, or local resource agencies, non-profit conservation organizations, or private land managers; the transfer of title to such entities; or by restrictive covenants. For government property, long-term protection may be provided through state or federal facility management plans or integrated natural resources management plans. When approving a method for long-term protection of non-government property other than transfer of title, the permitting authority shall consider relevant legal constraints on the use of conservation easements and/or restrictive covenants in determining whether such mechanisms provide sufficient site protection. To provide sufficient site protection, a conservation easement or restrictive covenant should, where practicable, establish in an appropriate third party (e.g., governmental or non-profit resource management agency) the right to enforce site protections and provide the third party the resources necessary to monitor and enforce these site protections.
  - (2) The real estate instrument, management plan, or other mechanism providing long-term protection of the compensatory mitigation site must, to the extent appropriate and practicable, prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise jeopardize the objectives of the compensatory mitigation project. Where appropriate, multiple instruments recognizing compatible uses (e.g., fishing or grazing rights) may be used.
  - (3) The real estate instrument, management plan, or other long-term protection mechanism must contain a provision requiring 60–day advance notification to the permitting authority before any action is taken to void or modify the instrument, management plan, or long-term protection mechanism, including transfer of title to, or establishment of any other legal claims over, the compensatory mitigation site.
  - (4) For compensatory mitigation projects on public lands, where state or Federal facility management plans or integrated natural resources management plans are used to provide long-term protection, and changes in statute, regulation, or agency needs or mission results in an incompatible use on public lands originally set aside for compensatory mitigation, the public agency authorizing the incompatible use is responsible for providing alternative compensatory mitigation that is acceptable to the permitting authority for any loss in functions resulting from the incompatible use.<sup>40</sup>

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- (5) A real estate instrument, management plan, or other long-term protection mechanism used for site protection of permittee-responsible mitigation must be approved by the permitting authority in advance of, or concurrent with, the activity causing the authorized impacts.
- (b) Sustainability. Compensatory mitigation projects shall be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context will support long-term sustainability. Where active long-term management and maintenance are necessary to ensure long-term sustainability (e.g., prescribed burning, invasive species control, maintenance of water control structures, easement enforcement), the responsible party must provide for such management and maintenance. This includes the provision of long-term financing mechanisms where necessary. Where needed, the acquisition and protection of water rights must be secured and documented in the Order conditions or instrument.
- (c) Adaptive management.
  - (1) If the compensatory mitigation project cannot be constructed in accordance with the approved mitigation plans, the permittee or sponsor must notify the permitting authority. A significant modification of the compensatory mitigation project requires approval from the permitting authority.
  - (2) If monitoring or other information indicates that the compensatory mitigation project is not progressing towards meeting its performance standards as anticipated, the responsible party must notify the permitting authority as soon as possible. The permitting authority will evaluate and pursue measures to address deficiencies in the compensatory mitigation project. The permitting authority will consider whether the compensatory mitigation project is providing ecological benefits comparable to the original objectives of the compensatory mitigation project.
  - (3) The permitting authority, in consultation with the responsible party (and other federal, tribal, state, and local agencies, as appropriate), will determine the appropriate measures. The measures may include site modifications, design changes, revisions to maintenance requirements, and revised monitoring requirements. The measures must be designed to ensure that the modified compensatory mitigation project provides aquatic resource functions comparable to those described in the mitigation plan objectives.<sup>44</sup>
  - (4) Performance standards may be revised in accordance with adaptive management to account for measures taken to address deficiencies in the compensatory mitigation project. Performance standards may also be revised to reflect changes in management strategies and objectives if the new standards provide for ecological benefits that are comparable or superior to the approved compensatory mitigation project. No other revisions to performance standards will be allowed except in the case of natural disasters.
- (d) Long-term management.
  - (1) The Order conditions or instrument must identify the party responsible for ownership and all long-term management of the compensatory mitigation project. The Order conditions or instrument may contain provisions allowing the permittee or sponsor to transfer the long-term

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management responsibilities of the compensatory mitigation project site to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager, after review and approval by the permitting authority. The land stewardship entity need not be identified in the original Order or instrument, as long as the future transfer of long-term management responsibility is approved by the permitting authority.

- (2) A long-term management plan should include a description of long-term management needs, annual cost estimates for these needs, and identify the funding mechanism that will be used to meet those needs.
- (3) Any provisions necessary for long-term financing must be addressed in the original Order or instrument. The permitting authority may require provisions to address inflationary adjustments and other contingencies, as appropriate. Appropriate long-term financing mechanisms include non-wasting endowments, trusts, contractual arrangements with future responsible parties, and other appropriate financial instruments. In cases where the long-term management entity is a public authority or government agency, that entity must provide a plan for the long-term financing of the site.
- (4) For permittee-responsible mitigation, any long-term financing mechanisms must be approved in advance of the activity causing the authorized impacts.